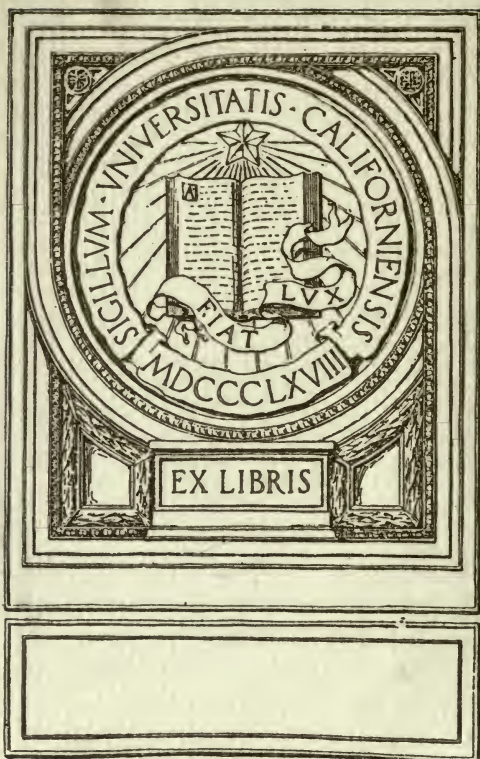



HUSH
OR
THE HYDROPHONE SERVICE

H. W. WILSON





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HUSH

OR

THE HYDROPHONE SERVICE

INTRODUCTION

*Nullus est liber tam malus ut non
aliqua parte prosit.*

PLINY.

BEFORE I began this book, I thought that an apology for its production would be required, and now that I have finished it, I am certain.

I suppose that it would be untrue to say that it is devoid of pretension. Nothing in the nature of an attempt can ever be entirely devoid of pretension.

Let me hasten to say though, that any aspiration of mine that may be embodied herein is strictly limited, and if I succeed in entertaining most of those in whose company I spent a short period of the war, and a limited portion of the public beyond, I shall have achieved as much as I dared to hope.

Here you will find no thrilling accounts of fleet actions, no picturesque Q-boat enterprises, nothing at all of that nature, except one encounter with a submarine.

No one is more sorry than I that I can only give you one such encounter, but I am entitled to my opinion that this fact is at least as much the fault of the submarines as my own.

It was an everyday occurrence for members of the hydrophone service to be asked "What is a hydrophone?" Surely this fact in itself is sufficient justification for an unambitious attempt to give to the public a few details about a service of which, on their own admission, they know nothing.

At that time it was not possible to enlighten them. The curtain was still down on all the various methods adopted by the Admiralty to counteract the submarine menace. For then it was of paramount importance that the enemy should be kept guessing, as far as possible.

The word 'hydrophone' itself was sufficient to suggest its nature to such as knew the derivation, and it was best to err on the safe side, and not to satisfy the curiosity of those who did not.

The curtain is now no more than half up. All such measures as may be adopted to deal with a new menace are obviously capable of indefinite development, and are altered, modified, and improved to meet the change of conditions, and so

it was, and still is, in a certain degree, with the hydrophone. There still remains much of recent development of an intimate nature that admits of nothing further than shadowy suggestion.

A limit is therefore put to the material at the writer's disposal, and at once he is up against a serious difficulty. If he is going to treat the subject with the earnestness that it really deserves, he will soon find that his springs have run dry. He will be up against a wall, through which there is no door of passage, and against which there leans no ladder which he may scale.

This was not the only objection to which a serious treatment of the subject was open. The writer would have to possess very real qualifications of a technical nature, which assuredly formed no part of my literary equipment.

The first of these objections applied also in a measure to a purely light-hearted treatment of the subject.

Is the hydrophone a piece of mechanism, the very thought or mention of which is likely to provoke unbridled mirth? Does it bask in an atmosphere of perpetual humour?

Those who know the hydrophone far better than I may hold a contrary opinion. Mine is that it perspires prose from every pore, prosaic to the last degree!

One found oneself left with the alternative of a hotchpot, a combination of the two courses.

There only remained open an attempt to give a little sketchy outline of what the hydrophone service was out to do, and to weave thereinto a little of such humorous incident as entered into our lives. This then I have attempted to do.

The focal point of a great part of this little book is H.M.S. *Tarlair*, the base of the hydrophone service, the Nursery Garden where the seedlings were forced, tucked away in the little fishing village of Aberdour, in the county of Fife, on the Firth of Forth. By the way, I say 'fishing,' and for the following reason. While we were there, none of the inhabitants appeared to do any work at all, so out of courtesy, I am compelled to use the title 'fishing,' which of course was forbidden in that area during the war.

Here, then, was the training and experimental station, which controlled the bulk of all British shore hydrophone work. Offshoots, as will presently be shown, were dotted round the coast of Great Britain and Ireland, and extended even as far as the Mediterranean.

A chapter has been included, which is intended to be typical of life at one of these stations, and two chapters on the 'porpoise' hydrophone, used afloat from the naval base of Peterhead, Aberdeenshire, and afterwards from Hawkcraig, Aberdour.

Here, I think, is the place to say something of the gradual growth of this new service, from its

earliest beginnings, until it became recognized as one of the most important arms used by the Allies to limit the activities of the submarine.

In January, 1915, Commander Ryan, as he then was, assembled a working party, the personnel of which consisted of half a dozen able seamen, and himself, with the result that the first authorized hydrophone was laid from Granton harbour in that month, from a small open boat, the process being performed by Commander Ryan personally. From this small beginning did the hydrophone service flow.

February of that year must certainly be styled a red-letter month in the annals of the Service, for therein H.M. Drifter *Tarlair* was detailed for experimental purposes, and placed at the disposal of Commander Ryan. At the same time a small workshop and office were established on Granton pier, and the staff increased by the addition of six officers and twenty chief petty officers.

The summer period also stands out as a memorable signpost. It was this time that saw the building of Number One hut at Hawkeraig.

In after years one never even thought of Number One but with reverence. It was here that the Captain's marvels might be viewed. This was the show hut, which drew the hosts of distinguished visitors to our base, whether British or foreign, and, on suitable occasion, it was cer-

tainly possible to detect a mystified awe on the countenance of the illustrious stranger, as he issued from Number One under the pilotage of Captain Ryan the 'Genie' of the place.

As a direct consequence of the erection of this hut, from this time onwards, most experimental work was carried on from the north side of the Forth, and as the star of Hawkcraig waxed, so that of Granton, as a hydrophone base, waned.

In May of the same year came into being the pioneer of the shore listening stations, on the island of Inchcolm, which lies in the Forth, about a mile and a half south of Hawkcraig Point. It was followed shortly afterwards, in May, by another at Elie in Fife, some eighteen miles east of Hawkcraig, on the same side of the Forth. Both these stations were manned by four chief petty officers, not under the command of an officer.

In June the field of operations was extended, and an excursion was made to Cromarty.

This programme involved an increase in establishment, and cable-laying drifters, with the result that *Vanguard*, *Couronne* (in later days the drifter detailed for instructional purposes) and *Eros* were added to the fleet.

The early autumn found Lowestoft commissioned as a hydrophone station, to suffer, during its history as an active station, bombardment by German battle-cruisers.



CAPTAIN C. P. RYAN, C.B., R.N.

THE
END

It was also at about this time that a successful start was made in the fitting of hydrophone plates in submarines, on the principle that 'dog should eat dog.'

In the winter of 1915-16 experiment proceeded on the same lines as heretofore, but there was little fresh during this period calling for comment.

A noteworthy occurrence of this winter, however, which, no doubt, tended to impress on the Service the stamp of individuality, was the removal of the entire establishment, or what remained of it, from Granton to Hawkeraig, and in December, 1915, the Service was first known as H.M. Experimental Station, Hawkeraig.

The summer marked the growth of the shore hydrophone policy, and an ambitious and far-reaching programme commenced, which included Inchkeith, Elie (which had been temporarily abandoned the previous October), Fidra—that inhospitable and barren rock at the entrance of the Forth—Stanger Head, and the Isle of Wight. Of necessity the personnel was considerably increased, and by this time totalled the hundred, consisting of twenty officers and eighty C.P.O.'s.

So full of promise did the principle of the hydrophone appear to be in the detection of the submarine that, during the autumn and winter of 1916, a policy of offence was inaugurated, and no fewer than fifteen hundred drifter sets were supplied by Hawkeraig, for use by the Auxiliary Patrol.

Three instructional parties were formed, and detailed for visiting all home and Mediterranean stations. These parties lectured and demonstrated the principle of the hydrophone in general, and of the drifter sets in particular, to over seven hundred officers and fifteen hundred ratings.

The early months of 1917 marked a great increase in submarine activity, which was countered as best it might be by the sanction of twelve more stations, at home and abroad, with a correspondingly large increase in personnel.

An organized system of training of officers and ratings was instituted, an instructional staff appointed, and lecture-halls, workshops, *et hoc genus omne*, put up. There was also started a separate submarine department, for the fitting of all submarines with hydrophones.

The spring of 1917 found H.M.S. *Tarlair* in commission, and thereafter, until the end, all hydrophone officers and ratings, either for sea or shore service, attended Aberdour for courses.

Belonging to this epoch are the bi-directional hydrophone for offensive work, and the tripod for station defensive work, both replacing older types; and but little after them came the shark fin for drifter use.

The needs of the stations called for more cable vessels, which were duly commissioned to *Tarlair*.

The remainder of 1917 was chiefly occupied in

giving effect to the programme already outlined.

In the New Year the Admiralty passed the construction of ten more shore stations at home and abroad, and six sound-ranging stations.

We now reach the era of the rubber 'eel' and 'porpoise' hydrophones.

Both these instruments spelt a new departure. They could be towed from the stern of a vessel under way—a marked advance—and furthermore the latter instrument was a direction indicator.

The cables originally used with both types were rubber-covered, instead of having the usual creosoted hemp covering of the tripod variety.

Although they were particularly heavy, they were not so steady in the water as the type which replaced them. Occasionally their undulatory movement would create a vibration, reproduced on the telephone receivers, which it was necessary to eliminate from the mind.

The tripod type of cable was also used, but though more satisfactory in operation than the last mentioned, it fell short—so it was agreed—of the open braided plait cable. Those who used this cable under all conditions of weather supposed that the partial percolation of the water, through the open plait, had a 'holding up' or steadying effect on the towline.

A new school of porpoise instruction was started at Elie for training personnel in its use ; and hunting flotillas, using the porpoise, commenced operations in the summer, and carried on until the Armistice, when the 'P.-P.' force (Porpoise-Paravane) consisted of *Talisman*, *Orpheus*, *Phæbe*, P. 33, and *Dee*.

At the close of anti-submarine operations, there were, on the books of *Tarlair*, 120 officers, 650 ratings, and 12 cable-laying drifters.

The establishment embraced 31 shore hydrophone stations, at home and abroad, officered and manned by *Tarlair*. In addition to these numbers, 1090 officers, including Base hydrophone officers, submarine officers, and Royal Marine submarine mining officers, and 2731 ratings had either attended Hawkcraft for courses, or had received instruction from *Tarlair* travelling parties.

And lastly, some 1500 ships of all denominations were supplied with hydrophones, the fitting of a large number of which was under *Tarlair* supervision.

A famous man of letters once said of Charles Lamb—"His sayings are generally like women's letters, all the pith is in the postscript."

By accident of birth I happen to be a man, so all mine is contained in the introduction instead. Furthermore and moreover, for so much of it as consists of history I am indebted to Mr. E. J.



AFTER THE STORM.

Commander Hervey and No. 1 surveying the damage on the *Dee*. Observe the remains of the whaler's davits (*see page 111*).

Mackenzie Hay, our late Instructional Officer, for his kind assistance.

Well, I have outlined here what it has been my endeavour to do, and how I have tried to do it, and must leave it to the reader to say whether this humble attempt has been justified.

Many of the allusions I have made had to be, and obviously are, topical. Bearing this fact in mind, I have incorporated a few annotations, in order, as far as possible, to make them clear for the benefit of any readers whom I may be fortunate enough to secure, who were outside the Service.

One further point I should like to make is this: most of us when we joined up had little or no idea what it was we were joining. We knew as little or as much as the public. We were the public! We knew that it was the anti-submarine service, but nothing of the methods employed.

I, for one, assumed that, after a short apprenticeship, I should be dashing out to sea, and be at hand-grips with U-boats all day long, only leaving until to-morrow those that I simply couldn't find time to deal with overnight.

It is this very point that prompted me to try and say something about it.

15TH FEBRUARY, 1919

O mihi præteritum referat si Jupiter annum!

FROM Hawkeraig House¹ I view the dismal scene ;

No more divisions² start the day's routine.

No more at nine the twice-repeated³ bell

Lends haste to 'Powsky,⁴ Peter, and Durell.

No more will Wilkinson aboard *Couronne*,⁵

At nine so full of life, at twelve so wan,

Peruse the *Scotsman*, and select the share,

Discuss with Shearing whether ' bull ' or ' bear.'

No more will Eden's Fidra⁶ call a laugh,

Nor Spence's sleep be broken through the
' graph ' ;⁷

¹ Hawkeraig House was a somewhat derelict domicile within a few paces of the instructional listening hut, next door to the Captain's cottage. Three weeks spent there reflect the tone of depression running through these lines.

² ' Divisions ' : The naval equivalent of parade.

³ ' Twice-repeated bell ' : two bells—9 a.m. naval time.

⁴ The vigour of their work amply atoned for the lateness of their arrival.

⁵ H.M. Drifter *Couronne*, when available, was invariably used for instructional purposes.

⁶ Eden brought back from Fidra a remarkable rumour about the local rabbits which would paralyse the biologists—if it were true !

⁷ The ' graph ' was a test in imagination to which every student aboard H.M.D. *Couronne* must submit. It will be described in detail in a later chapter.



"KELLY" AND "POWSKY."



H.M.S. *INDOMITABLE*.

THE
MUSEUM

Nor Little, playing with the purring eel,⁸
Postpone arrival, and delay a meal.
No longer Boon⁹ the awful burden bears,
Of giving weight to everything he hears ;
Nor Jackson¹⁰ of the histrionic art,
Includes a pre-war whisky in the part.
No more will Aston,¹¹ Miles, and Gould
contest,
In friendly rivalry, the witty jest.
No more the fearless Smithers¹² spokesman be,
To brave the critics of the A.S.D.
No more will Kelly¹³ of the hut expound
The true interpretation of the sound,
And speak so learnedly of tone and pitch,
Transformer,¹⁴ Station-board,¹⁴ Turnover¹⁴
switch.
No more the monster in the hangar rides,

⁸ The 'eel.' A towing, non-directional hydrophone referred to in the Introduction, sometimes exercised by Little, C.O. of *Couronne*, at an hour that simply cried to you to hasten back to the base and satisfy the inner man.

⁹ Boon used to disentangle from the confused murmur, a sufficiency of sounds for a Queen's Hall outfit.

¹⁰ In Red X Week 'the tabloid' was acted. Jackson is asked "Have a drink, old chap?" The book says, "No, thanks," but that isn't what Jackson said.

¹¹ Raconteurs.

¹² Smithers was sent down to the Admiralty, Anti-Submarine Division, to argue the case of the compensator hydrophone, and said (either truthfully or modestly) that he knew absolutely nothing about it!

¹³ Lieutenant Kelsall, officer in charge of the instructional listening hut.

¹⁴ Technical terms that will NOT be explained later.

No more will Halford¹⁵ worry over tides,
 Nor suffer nightmare in the lieu of dreams,
 As when subservient to the will of Wemyss.¹⁶
 Ah me ! the melancholy of it all ! But stay !
 Reverse Time's wheels ; six months ago to-day,
 I bid thee tread with me, on surest feet,
 The mountain's track¹⁷ —Heath Robinson's
 conceit —

Cut not the corner, through yon narrow pass,
 Unjustified by rank, keep off the grass !
 Ah ! there's the lecture hut, we've come so far,
 Burnett¹⁸ will prove C equals E on R ;
 Through thin partition Willott's¹⁹ class is fired
 By zeal, to learn how this or that be wired.
 Comes next to view a very man, in fact
 Full to the brim of sympathy and tact,
 Modest yet able, whoso knew would yield
 Before the charm of his magnetic²⁰ field ;
 The very pivot of the ' Point ' his rôle,

¹⁵ Sub-Lieut. H. Constant, R.A.F., alias 'George,' a great authority on politics, among his tritest sayings, "Take ——. What's he done ? Damn all !" Thus was the argument clinched, and thus was a very distinguished statesman counted out. His life work, gone ! like a puff of smoke !

¹⁶ Captain Michael Wemyss, experimenter in wireless control.

¹⁷ Steps to the higher level, worthy of Heath Robinson.

¹⁸ The 'professor' who told us that current in amperes = electro-motive force in volts over resistance in ohms. Now you know it, and as Isaak Walton hath it, "Much good may it do you."

¹⁹ His brother, or more accurately his brotherly professor.

²⁰ Technical term, meaning the 'lines of force' round a magnet.



CAPTAIN RYAN'S COTTAGE.



HAWKCRAIG HOUSE AND COTTAGE.
Heath Robinson's steps in the background

TO THE
MEMBERS OF THE

A peg well rounded in a rounded hole,
 E. J. Mackenzie Hay,²¹ whose hut explored
 May show you Browning²² and his drawing-
 board.

Stray further down the path, half-right incline,
 Walk boldly on ; above the door a sign :
 ' Commander's office.' Enter !—seated Burd²³—
 From out the holy sanctum may be heard
 ' Bray's Vicar '²⁴ whistled : be it understood,
 The wind blows fair, the augury is good ;
 Who hears the tune may know the hour is best
 To ask a favour, or prefer request.

In good conceit with fortune fairly wooed,
 Helm hard a port, and see Commander Froude²⁵ ;
 The scholar's touch in him expect to find,
 Hands locked behind his back, and head inclined.
 How stand you with the Captain, there's the
 rub !

No measured half, a welcome or a snub ;
 Who enters here the plotted curve can trace,
 Or zenith, or the nadir²⁶ of disgrace.
 You spare a second, ere you haste to quit,

²¹ The senior instructional officer.

²² Draughtsman.

²³ Commander's civilian clerk.

²⁴ The author has heard the Commander whistle much and often both afloat and ashore, but never any other tune than "The Vicar of Bray."

²⁵ The Captain's *fidus Achates*. If *persona grata* with the Captain, you were the 'goods' Commander Froude was looking for.

²⁶ An astronomical term, meaning the opposite of zenith.

To listen to the ' Bishop's ' ²⁷ stately wit.
 Set East by South the course, our next concern
 Is he who pays us monthly what we earn.
 If this were really so, 'twere reasoned sense,
 He spared his job, the Nation spared expense ;
 But as things are, he tends a scattered flock,
Tarlair to Tory, ²⁸ *Lichen* ²⁹ and *Thule Rock*. ²⁹
 The current, like a gulf stream, leaves the Firth,
 Meanders round, and almost girds the earth ;
 In cabalistic green, ³⁰ o'er land and sea,
 The cypher flies—he never sends the key !
 We now inspect how Parkyns' pencil shows
 —In theory only—how the ' porpoise ' ³¹ tows.
 Next Number Six, be careful ! not a sound !
 Take off your shoes, you stand on hallowed
 ground !
 With bated breath, and gentle tiptoed tread,
 Nigh overwhelmed by apprehensive dread,
 You knock and enter, blinded by the light
 Of wisdom, shining from Olympus' height.
 Selected leaf, wheat winnowed from the chaff,

²⁷ Lieutenant Parsons' *nom de guerre*, or shall we say *nom de plume* ? for he was Commander Froude's Secretary. On an occasion he was gravely scandalized at the levity with which the author accepted the charge of having lost P.33's secret orders. As a matter of fact a portly and somnolent Paymaster at—well, never mind—had been sitting on them for ages.

²⁸ An Irish shore hydrophone station.

²⁹ Cable-laying drifters attached to *Tarlair*.

³⁰ Our Paymaster had a passion for green ink. His writing was artistic, but undecipherable.

³¹ This is a quasi-index, so all I have to say is "see *passim*."

Scarce mortals they. Hats off!! the Captain's staff!!!

Just hark to Finlay's masterly discourse :

"Thus run the carmine tintured lines of force."

The Major,³² Ward, and Cotton nod assent,
In mute surprise we wonder what they meant.

One rapid glance, and all around we saw
Short cuts to win the European War.

While yonder mine disintegrates a Fritz;
That magnet there collects the scattered bits.
And on the bridge, perhaps Lieutenant Black,³³
All way he faces, but to turn his back.

When you rejoin your ship; "*Tarlair* small
boat!"

You hear him shout, ere you can get afloat.
When further on your round, the O.O.D.

Presents the chance, a yarn with Mr Lee.³⁴
An hour waiting, bored? Why not a bit!
Beguiled by Dicky Smythe's³⁵ Hibernian wit.

To-day, however, we remain ashore,
Just carry on, and enter Number Four.

The absent chieftain's cloak on Breare³⁶ and
Day,³⁶

³² Major Bruce, R.M.S.M.

³³ Permanent officer of the day.

³⁴ The Gunner, whose duties, at any rate to the uninitiated, seemed very far-reaching. If you caught him in a reminiscent mood you were assured of entertainment.

³⁵ Black's Number One.

³⁶ Petty officers working in Number Four hut.

At Peterhead, with porpoise, he's away ;
Full to the brim of boyish prank and fun,
Where others call a halt, Jock's³⁷ just begun ;
His comrade on the Dee, of different style,
Like Henry Beauclerc, never known to smile.
In Number Three, two Mac's and Morton view,
Best judges they of what they really do.
Now Number One affords propitious chance—
Away the Captain—for a furtive glance.
Here Wemyss' ambitions and his aerials³⁸ find,
Or such as are not scattered by the wind.
The workshops enter, Smallwood's proud domain ;
With King he plies the art of Tubal Cain.
And be it whispered, well within their zone,
Perfected sound-box of a gramophone !
The secret of the ' porpoise ' here you seek,
Its brazen entrails and its ribs of teak,
Its adult life from embryonic birth,
How well it baffles,³⁹ and its leak to earth.³⁹
Now Vulcan's forge is passed, belike is found
A stiff uneasy concourse gathered round ;
Self-conscious looks, and neat unsoiled suits
Proclaim them what they be, but new recruits ;

³⁷ Jock Forrester, the hero of modern Scottish romance. Sometimes I wish that I had concentrated on him, rather than on the hydrophone.

³⁸ They were rather like Little Bopeep's sheep.

³⁹ Technical expressions. A baffle plate usually of lead masked one of the diaphragms of the revolving drum, so that, on the bearing reciprocal or opposite to the correct one, you got a diminished sound intensity. 'Leak to Earth': an escape of electric current, measured in volts.

The Jaunty⁴⁰ in their midst, in grim content,
 He thus harangues—his ordered element—
 “A happy time is yours, if you but see,
 That only two can count, the ‘Bloke’⁴¹ and me;
 Give over laughing there! It’s not a joke,
 It’s me that really counts, and not the ‘Bloke’!”
 We’ll pass an empty hut along the track,
 In after days here Peter⁴² wrote to Jack,
 But duty called him first, here he and staff
 Would speed your journey down the ‘civvy’ path.
 But one remaining shed completes the roll,
 Where Robbie⁴³ seldom is: ‘the better’ole.’⁴⁴
 Nought left but briefest comment to be made
 On yonder ship, by the cables laid.
 Life on the trawler *Cræsus*⁴⁵ surely meant,
 The quietest number of a sweet content.
 To night a pair you find, for Pythias⁴⁶ heard
 When Damon’s⁴⁶ ‘killick’⁴⁷ dropped; now add
 a third,⁴⁸

⁴⁰ Jaunty: the Master-at-Arms.

⁴¹ Generic term for all R.N. Commanders. It is not suggested, of course, that the Jaunty on such an occasion would use any other term but ‘Commander.’

⁴² Our youthful demobilization officer. ‘Jack’ is his story, not mine.

⁴³ Engaged on submarine hydrophones. Often away.

⁴⁴ His office was so styled.

⁴⁵ H.M. Trawler *Opulent*.

⁴⁶ Inseparable friends of classical history. Lieut.-Com. G. Mackie, and Lieut. Bernard Ryan, the Captain’s brother, in charge of the Elie ‘porpoise’ school.

⁴⁷ Nautical slang for anchor.

⁴⁸ ‘Iky’ Bell, the *Opulent*’s gunnery lieutenant.

Who means to tell us, so the story ran,
 How guns developed, since the war began.
 The wheels reversed again, but prove the point,
 Like Hamlet's watch, the time is out of joint.
 No laughter echoes from the parlour room
 Of yonder Inn, as silent as the tomb ;
 No object now to ask for ' Jimmy J,'
 The answer to your query ' he's away.'⁴⁹
 No more the genius of a Harty⁵⁰ shows
 The R.N.V. how good from evil flows.
 No more Brett's classic viol charms the ear,
 Distinctly pleasing, if a thought severe ;
 Nor Dobson's tenor holds a Red Cross crowd,
 Nor hosts of others, not to mention Stroud !
 No more divine ability to sing
 Gazettes for you a sub-lieutenant's ring.
 Gone Geikie, Hope, and Lulworth's Ross and
 Carr,
 Gone Eric Williams and the great ' J. R.'⁵¹
 No more can Stuart Mason truly say,
 It's Snell who puts me on the proper way.
 Naught too but recollection left to me,
 Of happy days with Ritson⁵² on the Dee ;
 Those records reproduced with strident shocks,

⁴⁹ A curious Scottish expression meaning ' gone for good.' To a request for an evening paper, the answer often was "it's just away." At first the ' Sassenach ' enquired when it would be back.

⁵⁰ Hamilton Harty, pianist and conductor.

⁵¹ J. R. Mason (of cricket fame) and Eric Williams, stationed at Freshwater in the Isle of Wight.

⁵² Ritson was Number One on the *Dee*.



H.M.D. *VANGUARD*.



HAWKCRAIG—"THE POINT." SHOWING SOME OF THE HUTS.

72 1000
1000 1000

But showed the hour's need, the ' Ryan box ' ;⁵³
I seem to hear them yet, the fashion's craze,
" Where rests my caravan " and " College
Days. " ⁵⁴

Now gone the vision and the shadows flown !
Tarlair too little and too lately known !
Look yonder Phœbus on his courses sped,
Has laved with lambent glory Downing Head,⁵⁵
And ranged through fire and purple, failing fast,
Too soon a mere remembrance of the past !
He, symbol of departure, marks the knell :
Hawkeraig ! a lasting and a fond farewell !

⁵³ The gramophone sound-box which was invented by Captain Ryan.

⁵⁴ This record was the *bête noire* of the Commander.

⁵⁵ The next headland S.W. of Hawkeraig.

EPITAPH

O THOU to come, remember in thy prayer
These last remains ; here buried lies *Tarlair* !
Thy earnest wish —nor think to ask in vain—
Should Fritz get going, may she rise again !
But if assured the freedom of the seas,
She did her bit. Here let her lie—at ease !

THE DAILY ROUTINE

“What is a cable, Father?”

“A cable, my dear, is a long thing like a snake that sailors work on.”

“What is a cabal, then?”

“A cabal is a long thing like a snake that works on the sailors.”

WHAT'S the time? Ten minutes to nine. Quite time to get a move on. As usual, raining! It would be!

You hurry on your way along the lower shore path. On your right lies the little bay of Aberdour.

The eye can just distinguish the grey ill-defined outline of Inchcolm, except when a heavier squall of rain than usual draws down the curtain.

Outlined in the same melancholy drab are the silhouettes of *Pegasus* and *Campania*, the aeroplane supply ships, alternately appearing and disappearing for the same reason.

At fixed intervals is borne upon you the monotonous dirge of Inchkeith's fog siren, in keeping with the weather's mood, and, incidentally, your own.

Splash! splash! No time to pick your way, even if it were possible. This path you are



H.M.S. *ROYAL OAK*.



H.M.S. *PEGASUS*.



H.M.S. *GLORIOUS*.



H.M.S. *TEMERAIRE*.



traversing will respond to the slightest shower of rain, and on such a day as this is a veritable morass.

It is five minutes past the hour as you pass through the gates bearing the legend 'Admiralty Property.'

You were too late even to hear the stentorian shout of the 'Mudros Marvel'—"Out pipes, fall in!" to be followed by "Section leaders, carry on."

The stream of petty officers making your way confirm the accuracy of your watch. You have missed 'Divisions.' Does it matter? To tell you the truth, I was never quite clear in my mind whether it mattered or not. I had a notion that the Instructional Officer had your absence under observation—if such an expression may be used. He wasn't the kind of person who missed very much. What use, if any, he made of his knowledge must remain one of the secrets of the war.

A hurried glance at the rota shows you that you are afloat all the morning. So you dash along the wooden pier, and breathlessly tumble aboard H.M.D. *Couronne*, just as she is casting off her moorings.

By this time you are thoroughly wet. Oh yes! you have on your 'oily,' or rather your 'pegamoid,' which is the type of supposed waterproof in which you invested when you joined up.

I don't wish to bore you, but I really must

say a word about these garments ; it is a subject on which I feel strongly, at least when it is raining.

It is literally true that the actual ' pegamoid ' surface is proof against the rain, but the collar is of such a design, as will ensure your not being disappointed. It is shaped like a cornucopia or arum lily, and refuses to adopt any other formation. You turn up the collar and save the rain the trouble of trying to penetrate the ' pegamoid.' You literally collect all that is going. It glissades in a constant but refreshing stream down your neck. Your comrades grumble, you are getting more than your fair share, there is not enough to go round.

Any drops that escape this trap—assuming that you are in a sitting position—collect in your lap in a beautiful pellucid little pond. By the way, does a man have a lap ? A woman has, and they say the gods have. Well, let it pass, the ' pegamoid ' is a sort of skirt, and where there is a skirt, there also must there be a lap.

When you get up the pond obeys the laws of gravity. Does it hit the deck with a musical splash ? Bless you, no, not a drop of it ! It hits you, taking care to choose absorbent material, your socks for preference.

As soon as the ' pegamoid ' begins to wear, the dressing, or whatever it is called, flakes off, and the rain strikes where the armour is weakest.

Oh indeed, it is a curious garment ! Reader, you may have mine, if you can find it, for it is sculling about somewhere in the North Sea.

Da diddy diddy ! Da diddy diddy ! groan the old engines, but we're hardly away before we stop, and drift aimlessly on the strong spring tide, a few hundred yards off Hawkeraig Point, cut by the cruel east wind, and soaked by the pitiless downpour.

What are we waiting for ? Why hurry ? We're aboard a drifter, why not drift ? It's really quite fashionable at present. We follow this practice everyday for any period from a quarter of an hour to an hour.

The C.O. is over yonder at the point, waiting for orders and other things, hence the delay.

Why can't he step aboard with these orders from the point, and save so much time ? Yes, I have it ! Water finds its own level, and Hawkeraig Point is just as isolated as was Mount Ararat. Fancy not thinking of that at first !

Well, then ! Why should not these orders be brought down by the C.O. to the ship before she starts ?

You think you have got me at last, that I can't answer that ! Oh yes, I can though. If there is a precedent for something happening, it will always happen. It matters not the least that now there may be no reason for waste of time.

What was once done for a good cause, will be continued for all eternity for no cause whatever.

Routine admits of innovation no more than did the law of the Medes and Persians.

It is 10 a.m. The C.O. is aboard. The interval has given him no instruction that he lacked an hour ago, but the fetish of routine has received the burnt sacrifice of observation, and is satisfied !

I have kept putting off the evil moment as long as I can, but I find that there is a limit beyond which one should not go. I must let you know what we went forth to do, why we were aboard this drifter, on the waters of the Firth.

We were being taught how to catch submarines. Well, perhaps not exactly how to catch them, as we had no place to put them, but at any rate how to put salt on their tails, to kipper them, prepare them for someone else—the local patrol.

The gear we used was the hydrophone. Now I do not propose to tangle myself in a tighter mesh of technical detail than one out of which I can see prospect of easy escape. This has been my policy throughout, and seems to me to be full of comfort.

All that I can tell you is that a hydrophone is a piece of gear assuming various forms, portable in fact, and portable in theory (e.g. the porpoise, when someone else is staggering beneath its burden), containing a microphone (in another

place I shall tell you exactly what this is) enclosed between diaphragms which pulsate or vibrate, thereby causing intense agitation amongst the carbon granules in the microphone, and from the varying resistance opposed to the flow of electric current, results the translation of the engine sounds of ships in the vicinity, and any other neighbouring subaqueous tremors, such as the sighs of a lovesick mermaid.

All this medley of sound is reproduced by telephone receivers connected by cable with the hydrophone, and the classification is left to the judgment of the listener.

You will follow me, I trust, when I say that the basis of the hydrophone service is 'listening.'

This being so, it will not surprise you to hear that we were subjected to a rigorous medical examination on joining. All the organic equipment with which man is born into this world, including the vermiform appendix, was scrutinized and tested. Everything came under a punishing medical survey except only—the hearing!

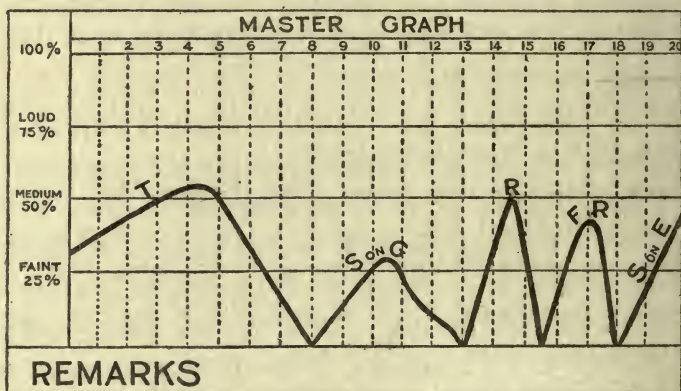
Given any of the minor maladies known to science, and you hawked your services elsewhere, but assuming soundness in other respects, but deafness anything short of total, and then it was just you for whom the hydrophone service, through its medical agent, was ardently seeking.

The method of recording one's observations

was known as 'graphing,' and the impression as a 'graph.'

The illustration will perhaps help to make the principle clear.

You retreat *en masse* into the bowels of the ship, where you must rely solely upon the efficiency of the hydrophone and your telephone receivers. If you are wise you have got down first, and annexed the most comfortable position, and perhaps the best telephone receivers.



You can, of course, see nothing except the familiar presences of your comrades. It is up to you to listen, and record your aural observations on your 'graph,' what time a somnolent P.O. keeps the clock for thirty minutes, the usual duration of the 'graph,' recording the passage of time thus: 1, 2, 3, 4, 5, etc., only missing the minutes when he is actually asleep.

Meanwhile an officer, 'the master-grapher,'

sits in the wheel-house, with telephones on his ears and an unobstructed view. He is the examiner and marks the 'graphs.' This man abundantly justifies the wisdom of the Medical Officer to whom we recently referred.

Nothing escapes this 'master-grapher,' whose 'graph' will be quite different from yours. He will hear with his eyes what you cannot hope to pick up with your ears. Everything he sees he records. The sympathy between eye and ear of this fellow is wonderful, astounding! Pardon my poverty of language, I cannot find the right word for it, and if I really tried he would merely think that I was being rude.

You can't guess how glad I am that I've cleared that old four-ringer M.O., I was getting rather worried about him, I was beginning to wonder whether he really earned the money the Nation paid him.

Now for a brief description of that 'master-graph,' a fine piece of imagination! The T curve would represent a turbine engine that is already running at medium intensity at the beginning of the 'graph.' It dies away at the end of seven and a half minutes. Just after the commencement of the eighth minute a submarine on gas, i.e. on the surface, is heard, to be succeeded, as is shown, by a reciprocating engine, then a fast 'recip,' such as a motor launch, and lastly a submarine running on electric motors.

You have here representatives of the two characteristic types of engine sounds.

The reciprocating family tree claims among its branches the plain 'recip,' the fast 'recip,' and also the motor launch, and the 'sub' on gas, though the two latter are of the combustion type; while the turbine and the submarine on electric motors, belong to the rival firm of rotary engines.

The sighs of the lovesick mermaid would be classified among the sounds not characteristically rhythmic, though why the poor girl shouldn't sigh rhythmically I don't know. It would sound rather effective, I think, don't you? I know that I should be much more inclined to investigate her trouble and do the best I could, if she did.

A word or two is called for on the nature of these sounds.

We have talked about turbines, 'recips,' submarines on gas, or electric motors. Let us just consider what these engines actually sound like as heard on the hydrophone.

The characteristic of the turbine is continuity, as opposed to a distinct beat. The pitch of sound will vary from a shrill whistle, when the vessel is distant, to a roar resembling the passage of a train through a tunnel, if the ship approaches the hydrophone closely.

The distant note resembles the sustained vibration of the E string of a violin, and it is

astonishing from how great a distance it may be heard. A sharp turn of helm by a destroyer (which class of vessel is of course turbine-engined) is reproduced by a clear bell-like note, lasting for a few seconds. This, no doubt, is the auxiliary turbine engine in operation, while the actual turn is being made, working the helm.

The ordinary slow or medium beat reciprocating engine once heard, can hardly be mistaken for anything else. There is a cycle of one major beat followed by three minor.

The varieties of fast 'recip' are more difficult to diagnose correctly, though those of the combustion type suggest an even-spaced and continuous tapping.

An endless source of confusion is created by auxiliary engines, and hammering, whether manual or mechanical. Particularly is this the case if the vessel under observation is of considerable size.

Lastly we come to the briefest consideration of the submarine running on electric motors, which is, after all, far and away the most important of all engine sounds.

I have heard this sound, as recorded through the receivers, likened to the rotary motion of a spoon in a tea-cup. Another description is a rhythmical sawing of wood.

Personally I consider that the latter descrip-

tion is particularly happy. This, in my opinion, accurately describes the 'timbre' of the sound. It merely remains to observe that no engine more clearly indicates that the something to which you are listening is actually going round than does the electric motor. In other words it shouts the word 'rotary' at you through the telephones.

On deck again you hear that the C.O. has been engaged in a heated altercation with divers destroyers, which were coming up in line ahead as you went down.

It appears that *Couronne* was lying absolutely where they wished to alter course for Granton, in the war channel, and in the process of drifting upset the entire evolution. The C.O. of each destroyer had something to say, and ours blushed when he conscientiously repeated what it was. Ah! He was a good lad!

Please note that this morning we have heard a submarine on gas and electric. This was our tame 'bus,' detailed to chase round us, and be listened to. But it was not always so. Day after day we would go out, with no other source of sound than a stray battleship or destroyer that might be passing, or the imagination of the 'master-grapher.'

You ask, "Why an obsolete submarine of our own, and that too, only occasionally." "Why

not a U-boat captured from the enemy, and run daily for our benefit ? ”

Why ask me ? I'm sure I don't know !

It is on official record that a certain ship belonging to one of our great allies chased a sperm whale for—I forget how many miles. The chase was by hydrophone, aural, and did not become visual until many miles had been run, when the hydrophone experts were reluctantly compelled to admit that their legs had been pulled, or at any rate their ears tweaked.

They state the fact that the sperm whale faithfully reproduced the sound of a U-boat running on electric motors throughout the entire chase.

You say that you can comfortably guess which of the allies that was.

Well ! I never said you couldn't ! If you never figure out anything stiffer than that, don't write home about it.

Several of us felt that it was a grave error of judgment on the part of the Authorities not supplying us with a tame sperm whale. We were hurt, and justly so.

I cannot think that it can have been due to any bother about rationing, because no one, where we were, seemed to worry about rationing.

Anyhow it seemed to be the obvious thing to do, but then doing the obvious thing often puts

you in the long grass, and never won a game yet.

Meanwhile, remember that it is blowing quite fresh from the east, and even in the Forth, when the wind is strong in that quarter, a small drifter will roll a bit, certainly too much for the Royal Marine Submarine Miners, or most of them, a section of whom we have on board.

Look at that poor fellow bemoaning his loss, his teeth, overboard! You don't believe this? I saw it myself, and in proof took an observation at the time. The bearing is $56^{\circ} 5' \text{ N. } 3^{\circ} 12' \text{ W.}$, in case the owner might like to look for them. Personally I am not interested, my own dentition should, with luck, last for years, or so my dentist tells me.

The morning's work is over. If you have scored a pass, your 'graph' goes into the Commander to keep. I think that he puts the 100 per cent ones into his scrap-book. He collects stamps, why not 'graphs.' I, for one, think that this is very selfish. I do not mind saying that I want mine back. I want to wave them in the face of my grandson, if and when he asks the question, "What did you do in the great war, Grandpa?" You can imagine the dear little fellow lisping, "Some Grandpa!"

Well, I haven't got those 'graphs,' but then I haven't got a grandson, so there it is. Perhaps I shall never have those 'graphs,' and perhaps



H. W. W.

C. D. Crooke.



COTTON, WARD, THE MAJOR, AND FINLAY.

THE
END

I shall never have a grandson, so perhaps after all it doesn't matter. Certainly the grandson doesn't—not yet, at least.

We are on the way back to Hawkeraig, and, after three fruitless attempts we successfully tie up alongside the wooden pier at 12.30 p.m.

This morning, as usual, we overshoot the mark, after having rammed the pier, so as to act as a brake. A piece of the structure falls into the water, and is carried away by the tide. This is indeed a war of attrition!

At last we secure, not before a venturesome one of the party has leaped for the pier, and been left hanging from a stay, as the ship swings away again. It is a position of some peril, but fortunately the situation does not develop beyond the ludicrous.

Thus far the morning's work. This afternoon you will take your instruction ashore. You are down for a lecture, and two hours of signals. We will join your section, as we are anxious and want to know what progress, if any, you are making, and when you are likely to be a full-grown thorn in the flesh of Fritz.

What time did you say? Two o'clock! Right! I will be there. Excellent, it has stopped raining. Now for lunch; I've got no end of a twist.

At five minutes to two you take up your position with your section, outside the listening hut for afternoon divisions.

You are in time, your conscience is clear ; it is no longer raining, you have lunched, if not well, at least sufficiently, and the eye of the Instructional Officer appears almost benevolent. You are in a distinctly receptive condition, your mind, fit soil for the seeds of wisdom to be scattered broadcast for the space of an hour in the large lecture hut.

Very well then, carry on ! Let us get there. Remember that we are on the shore level. Just at our feet the waves are lapping the felspar boulders that lie strewn in disarray all round the tiny bay of Aberdour. Behind frowns the crag that lends to us its name, 'Hawkcraig,' the menacing and barren termination of the pretty woodland heights that shelve down through the avenue of veteran beeches to the silver sands and the shore path to Burntisland.

This little corner of the Forth may justly claim a rare beauty, where the dense foliage dips from the heights to the very water's edge.

Somehow the connection of the sleepy little fishing bay with war seemed so incongruous. Hard by the Admiralty gate are the steps we must mount to reach the higher level. Backwards and forwards they zigzag, each step of a different height, a different inclination, and set in a different direction. The idea of the designer was obviously to make the ascent as perilous and sporting as possible. Hats off to him, he suc-

ceeded ! Heath Robinson running riot could have done no better. No mere dock ladders held any terrors for whoso had mastered this climb.

When they were first made, the Captain sent a drifter to Inchkeith to borrow the island goat, to see whether this feat were possible or no. At the third attempt the goat triumphed, and as there was a war on, it was decided that we must do the same.

The ' professor ' is waiting for us in the large lecture hut, chalk in hand and blackboard a sinister blank. You see before you a class of four superannuated schoolboys, and you have some conception of the material on which the ' professor ' had to work, and the difficulty of his task. He should be a daring man. He is ! What else do those fierce compelling eyes, and those beetling brows portend, but the master mind ? What does that broad expanse of shining forehead indicate, but the massive intellect ?

This morning we learnt ' the how ' of hydro-phones' behaviour, this afternoon we are going to learn ' the why.'

You ask why, at our time of life, with a war on, when time is of the essence of the contract, we should worry about electric phenomena. Why not take the conditions as read, as the auctioneer does ? What does it matter that electro-motive force is capable of achieving remarkable, if at

times somewhat ludicrous, feats? What is the use of asking me, I don't arrange the rota?

I, for one, should be only too happy to say, "I know that I can get good results with that hydrophone, and those telephone receivers, for I have just tried them. I know, on the other hand, that that lot over there is a dud, I can see that one of the leads is broken. Oh, yes! I know how to mend the lead. No! I can't be bothered just at present, can't you see I'm busy? I'm attending a lecture."

You're inclined to think that I'm wrong. Well, listen! What is that scientific platitude that the learned professor has just mouthed?

"A short circuit is one where the current takes a course other than that which is desired."

Did you ever hear a more monstrous statement! In the first place it doesn't even possess the elementary merit of being true. How can he teach us, how compel our attention, if he tells us things like that? He's abusing a sacred trust, violating the first principles of good faith. We are here against our will. It is hardly too much to say that our presence is under protest. We would much rather be playing golf, or chasing submarines than be where we are. Let him not suppose that anything will do for us. Years ago probably one or two of us had intellects of a sort. We have not now, of course, but no matter, there

may be and is some slight power of discrimination left.

I admit that if you assumed that this world was a good world, a world free from all vile passion, the statement might, at first blush, have some slender justification.

Come now ! Let's do a little serious thinking together. What is the prevailing sin in this most unsatisfactory planet of ours ? What is it that caused this war in which we have been engaged ? What evil instinct is it in you that makes you want to get another ring before I get mine, when you must know that you are not near so worthy ? Jealousy, of course !

And what does jealousy breed ? Surely spite, and vengeance, in short "getting your own back."

Suppose for example, that I am animated by that vile passion—Heaven forbid ! Suppose again that I come across some priceless electrical gear belonging to my bitterest enemy, unguarded, and uncared for ! Assume further the extremely unlikely premises that I know how to short circuit that gear. I ask you, is not that the very thing that I should most ardently desire to do ? Of course ! It hardly requires the intelligence of a small child to see that. No ! If you worded the platitude thus : "A short circuit is one where the current takes a course other than that which the owner of the gear desires," I might

—mind I only say that I might—be disposed to pass it.

This is only one of the many glaring mis-statements of fact that we were invited to digest.

It speaks volumes for the pertinacity and patience of the ‘ professor ’ that he was able to induce us to believe, or shall I say, take for granted, most of what he told us.

I think that I have given you my word that I would not bore you with further scientific detail.

This is really rather a pity for you, for my mind simply teems with the most ingenious theories, it always does, when I come out of that lecture hut. I should like to go into these matters with you at some length, make a confidant of you, and see what you really think. You couldn’t possibly think less of my ideas than do my friends, and you might think more. You haven’t got the time ! Perhaps another day ? Well, after all, a promise is a promise.

THE DAILY ROUTINE (*continued*)

THE hour of three finds us down the steps on the lower level again.

Under the lee of Hawkeraig the sun beats down strongly on this sheltered corner, and the old 'Chief' (Chief Yeoman of Signals) elects to hold his class out in the open.

Signals, as dispensed to us, consisted of semaphore and Morse, Morse being subdivided into (a) Sounder as used by the Telegraph Service; (b) Buzzer, the effect produced by the receiver of a wireless installation; and (c) the flashing lamp as used in all visual night signalling and also moderate distance intercommunication between H.M. ships.

Foggy weather produced every conceivable variety of (b). You are not likely to forget a period of Stygian darkness spent on the bosom of the Forth off Granton. Ships of every denomination, in every direction, were making "night hideous with their lamentation"—it was really day, but might well have passed for night.

They were Morsing on their syrens every conceivable kind of inconceivably unnecessary signal.

One ship, lying near you, faintly outlined in

the gloom, was, in this horrible language of hate, trying to make some other vessel grasp the fact that the signaller's C.O. was of the opinion that the weather was too thick for golf. The burden of the signal was repeated *ad nauseam*.

At last you found yourself idly speculating what this strident C.O.'s handicap was likely to be. Was it probable that it justified him in drawing the attention of the fleet to the fact that he played golf at all? No! A thousand times no! You felt sure of that. You pictured him a hopeless foozler, hacking the golf course to bits, under the cold eye of the secretary and the green keeper, receiving two strokes a hole, and even then no menace to his opponent, at least only from a purely military point of view.

Thank Heaven he has missed his game! I hope that he will never play golf again! If he does, may the shaft of his favourite driver split in five places! May his brand new Arch Colonel be mistaken by the nearest lady player for her tired remade, and may a murrain take him! It will serve him right for making such a song about it.

To qualify in Morse, we were required to attain a speed in 'buzzer' and 'sounder' of forty-five words in five minutes.

This was comparatively easy on the 'buzzer.' The 'sounder' possesses a back kick, when the operator releases the key, which forms no part

of the letter. The mind must automatically wash out this back kick, which, for a while, it finds some difficulty in doing.

The chief obstacle in reading the lamp rests in the 'eye fag' which ensues after a time, and renders the distinction between 'short' and 'long' difficult to appreciate.

The impression of a 'short' on a tired eye seems to be retained for an undue length of time.

Grand fleet flashing remained to the end more difficult to pick up than say that of a trawler, owing to the speed at which it was sent.

Take the advice of one who knows nothing whatever about it, but has listened to, but not carried out, the advice of those who do. Whatever you do, don't guess! For instance, supposing the signal you are transcribing has got the length of: "The little girl looked rather n . . ." If you are a confirmed guesser, you will without hesitation shout "nice," and prepare for the next word.

You may be right, but you are probably wrong. The word will turn out to be "nasty," or more likely still "naughty."

As I hinted, I am not one who should advise in this matter. I used always to guess when I was learning, and—afterwards. The best guess that I ever brought off was "flat on his stomach," when I only had the context and the letter 'f' on which to work. I was right, but the conscious-

ness of the bold achievement put me right off my beat for the rest of the passage.

Oh, the patience of the dear old 'Chief' ! He would sigh wearily, and repeat the letter until seventy times seven, if necessary, what time the pupil, who had long ago lost his head and become reckless, ranged through the alphabet four or five times, omitting each time only the right letter.

It was a curious fact that when we were taking a lesson in the open, more often than not there would be two or three aircraft from the neighbouring aerodrome hovering immediately overhead. Now it is the case that the slightest noise is a disturbing factor, quite enough by itself to put some people right off.

'Chief' said that the airmen could see quite plainly what was going on, and that their sole momentary object in life was to distract, prompted by sheer devilry. It sounds possible, so he may have been right. I do not know, as I never had the opportunity of a quiet word with those airmen.

Always wait until you have taken the end, the very end, of the signal.

Once there was a signalman, quick, efficient, but over confident. It came to pass that unto this signalman there came a signal the purport whereof was as follows :

----- to -----

"Await me ashore on a matter of urgency."

Thereupon the confident youth did straightway turn his back, for unto him it seemed that the burden of the signal was complete.

Now it chanced that this signal came from one who was a mighty chief, verily the greatest that be of those who go down to the sea in ships. Furthermore and moreover, the signal was for the ear of one in whom was vested power nigh almost of life and death over the body of this signalman.

But unto him it was most grievously difficult to make report, for was he not afloat on the mighty waste of waters ?

After much pother, and divers disturbances, the sailor chief was caused to know that a mightier than he was desirous to see him ashore most urgently, and right now. Then did he straightway speak wingéd words to the helmsman, ordering him to set the prow of the vessel towards the barren shore, and poured forth a libation unto Jove, supplicating him for a favourable wind. No sooner did the beaked prow of his trireme grate upon the beach than he hied himself unto his tent, and with great swiftness did don his glad rags, which being interpreted means 'his number ones,' and right continently awaited the coming of the chief that was mightier than he. Alas ! The mighty chief did not come until two hours and a half of an hour after Phœbus had set in the west, for the end of the

signal had said that the time of the coming of the great chief should be two hours and a half of another hour after sunset.

The moral of this true story, and it is true, is : Always take care to bide for the end of the signal lest a worse fate overtake thee than that which overtook the confident signalman.

In connection with practical signalling, the lack of a competent signalman may carry with it the risk of disaster, as witness the following.

On one dark winter's night, two of *Tarlair's* cable-laying drifters, *Thule Rock* and *Buck*, were trying to make the entrance of the Forth ; they wished to get up as far as Inchkeith before dropping anchor.

The C.O. of one of these small vessels had passed through the boom both by day and night on previous occasions, and thought that he knew where lay the gap.

You find him perched in the bows, with eyes for nothing else but the opening, as slowly the ship gropes her way west.

Presently *Fidra* begins to flash, and the signalman is told off to take the signal. Meanwhile the C.O., intent on his task, finds that he is on top of the boom, but not the gap ! He is too far north.

C.O. to signalman : " What did *Fidra* say ? "

" Don't know, sir, 'e went so fast, I couldn't read 'im."



E. J. MACKENZIE HAY.

W. Crook.

TO THE
MEMBERS OF THE
COMMISSIONERS OF THE
LAND OFFICE

Here was a dilemma. The gap undiscovered, and Fidra unanswered !

Fortunately it was well after the Armistice, or the next note of enquiry would have been a shell.

Both vessels sheered off as speedily as possible, and took shelter, such as it was, under the lee of North Berwick for the night.

That signal, read intelligently and answered, would have obviated what turned out only to be an irritating delay and an uncomfortable night, but might have spelt something much more serious.

You have taken your turn. How you have acquitted yourself is a matter of no moment. You sit somnolently marvelling at the stupidity of your fellow-creatures. How is it that that tawny-haired friend of yours is ignorant of the fact that Da di da da stands for Y ? Chief repeats the letter as usual, with the usual result. You always imagined that this friend of yours was a man of some intelligence. You are annoyed with him. How came you to make such a mistake ? It is not like you. Stay ! Can it be . . . no, surely not ! By Jove ! it is, this very same letter over which you yourself stumbled.

How absurdly easy it all seems when someone else is attempting to read it ! Your astonishment becomes the more complete on finding that he of the tawny head has deciphered more words than you in the allotted time.

The lesson comes to an abrupt ending. An

orderly confusion prevails. The boom of a distant gun rouses you from your reverie, and at the same time suggests an explanation.

It can hardly be that the enemy have got through that trap at the mouth of the Forth, and besides, had it been so, they would have disturbed you before. You're not the sort that can fiddle when Rome is burning, at least not in your sleep, the tawny-locked one knows that.

There is only one happening at Hawkcraig that could produce anything like such a stir. Halford is going up in the seaplane !

You think, reader, that this information you can afford to take with some measure of sangfroid. Ah well ! It may be so with you, but it was one of the events of our lives.

At present a fierce altercation is in progress between the Officer of the Day and the senior officer of the listening hut.

I must tell you that every hour of the working day a fresh section invade the listening hut to enjoy an unbroken hour's refreshing slumber. They have behind them the licence of the daily rota, which clearly lays it down that they not only may but are to do this thing.

'Kelly,' usually so unruffled and debonair, is pale with indignation.

Section 30 are asleep in accordance with routine, and while he is senior officer in charge, they are not going to be roused.

O.O.D. : " The Captain's orders are to get out the seaplane. I want all the men I can get."

Kelly : " Well you've got the fatigue section."

O.O.D. : " One section's not enough, you know that."

Thus the argument commences. The O.O.D. is a Scot of tremendous and purposeful integrity, while the listening officer hails from that part of the North Country where, short of letting you have it straight from the shoulder, they let you have it straight off the chest.

Assuming friction to be represented by the conventional letter 'r,' how does the altercation end ?

I haven't the least notion. I never wait to hear. I dislike altercations—other people's.

Follow me but a few steps to the hangar behind the listening hut.

The inside of the hangar has rather the appearance of a circus. A seething crowd is gathered round the seaplane. The 'Chief' is absolutely in his element, he lives for these occasions.

Chief : " Let her go a bit ! "

The winch begins to slack off cable.

" Easy ! Easy !! EASY !!! "

Not the slightest notice is taken ; the winch continues to pay out.

" Here, tell those darned idiots on the winch to haul in ! "

After five minutes' delay the coiled bight com-

mences sulkily to retreat, like a tired snake, and brings two of the audience heavily to earth in the process.

Meanwhile the seaplane has been pushed a few yards further seawards, and is by this time approaching the inclined plane of cement down which it must travel to the water.

At last, after a severe struggle, the bight has been taken out, and the cable is again taut.

“Pay out! Pay out!! PAY OUT!!!”

Relentlessly, inexorable as Fate, the winch continues to haul in, and slowly the seaplane retreats.

“Here, tell those darned idiots on the winch to pay out!”

After a brief delay the tension on the cable is eased again, and the beginning of the inclined plane is reached.

Here a prolonged halt is called, and petty officers are placed by the ‘Chief’ perched on the floats, while others are suspended, like so many fowls, from every conceivable portion of the ‘bus’ that would yield the necessary purchase, and from some that would not.

‘Chief’ has each and all of them weighed up to an ounce, as might any poulterer.

“Here you, you’re too heavy on the float; come off, my lad, and change places with him.”

Reader, have you ever bought tobacco by the ounce? Of course you have. Possibly at the



LAUNCH OF THE SEAPLANE.



THE OLD SKIPPER.
Couronne.



THE OLD CHIEF.

NO. 1000
1000

first essay the tobacconist has given you over measure. Watch him shred off the surplus with delicate fingers.

So it was with 'Chief.' A petty officer he added here, another he shredded there, and deftly he filled the gaps of such as fell off through misadventure, until slowly the seaplane tilted on the slope.

It was masterly and amusing. The casualties to date could hardly have exceeded what could have been counted on the fingers of both hands.

Without further mishap, the monster on the trolley reaches the sea, and the carriage is cast off.

The tiny wavelets lap gently against the floats in affectionate greeting, eloquent of the fitness of the elements, for the wind has completely died away, and with it the sea.

Who on earth are these, who seem to have sprung from the ground? Are they American footballers? Hardly likely! Divers? Possibly. Let us wait and see.

A close inspection shows that they are water-proofed from top to toe, and girded with floats round their waists, that would have sufficed to salve a sunken dreadnought.

Watch these intrepid fellows! Into the water they bravely dash to keep the seaplane straight, for she has now cast off from the cable and is on her own.

Halford starts the engine, and takes with him

two of these poor fellows, who, for some inscrutable reason, omit to let go. It is an agonizing moment, tense with drama! You shudder as you avert your gaze. You have no wish to witness a horrible death. Will they drown? No! They couldn't if they tried! At last, chancing everything, they gallantly let go, and struggle ashore as easily as that awful burden of cork will permit.

The novelist will usually tell you that "all this happened in a far shorter space of time than it takes to tell."

Well I'm not a novelist, I'm an historian, and I say that "all this took far longer to happen than it takes to narrate."

Once afloat, it was soon evident that the 'bus' would not, on this occasion, develop enough power to leave the water, although she would taxi, so back she had to come.

Reverse the sequence, and you get what happened on the way back, if you add the extra and for a time insuperable one of getting her back on to the slipway, owing to the set of the tide. The brilliant idea did at last occur to someone to harness the tail of the plane to a dinghy, so as to keep her from swinging off.

I'm not quite sure that you believe all that I have been telling you. All I can say is I was there and you were not, so who is likely to know concerning these matters?

Anyhow I can at least truly say that the business on which this seaplane went up, as often as not, was wireless control.

Come with me the next time she goes up. Below the circling plane observe a motor launch, lying long enough to become a settled part of the seascape, inert, a thing apart from life—alone!

On these occasions it always seemed as if there was something unnatural about that little M.L. One waited, expecting what?

Suddenly she throbs exultantly, and dashes off as on some settled purpose.

She has been started by the seaplane, and will be steered, controlled, and stopped by the same agency above. A marvel of man's achievement!

What's that you say? It's jolly lucky for our Captain that he didn't live in the Middle Ages; that the benevolent clergy of those times would soon have found out the fusing point of those brass buttons on his monkey jacket!

I don't doubt you, but then our Captain doesn't live in the Middle Ages, in fact he's hardly even middle-aged himself.

It is now that I should dearly like to tell you of the distinguished pilgrims from all parts of the dominions, and even foreign countries, from H.M. the King downwards, who visited our base, and of the strange and wondrous things that they saw. I think that I can anticipate your question. If I really have interesting information to impart,

why have I been feeding you on slops all this while ? You want your money back.

Well I can't help myself. There really are some secrets left. There may be another war. Supposing it's a civil war. Supposing that you and I are on different sides. For aught I know you may be a Bolshevik. You can't expect me to let you know beforehand what kind of stuff I'm going to give you. Besides, up till now I have conscientiously served out nothing but what I hope will be within your comprehension and—er—mine. If I went any further than this, it would be doing you a grave injustice. In calmer moments you will be the first to make the admission.

What are we talking about ? Just look at the time, it's five o'clock ! There, what did I tell you about that little affair of the seaplane ? It is the hour when I should be able to down tools. I say 'should,' for to-night my section's on night duty in the listening hut, and I with them, a melancholy business indeed !

Some of us condemned this night duty routine unreservedly. Their argument ran as follows :

Here you have a hydrophone station whose functions are purely instructional and experimental, tucked away in a remote corner of the Forth, as immune from attack as it is incapable of offence. Why keep men out of their beds to maintain a continuous hydrophone watch, re-

ligiously logging every engine sound they may imagine they hear through the long night ?

It seems to me that these people missed the point. In the first place this occasional discomfort was nothing very much to grumble at. This may be no argument, but my second point is.

If you want your green stuff to crop well in the summer, you must harden off the seedlings in the spring.

Most of both officers and men were destined for shore hydrophone stations, and were merely rehearsing here what they would have to undergo there. In normal times your turn would not repeat itself oftener than weekly at the worst.

However, it's my turn to-night, so I had better get right along now. With the exception of an hour's interval for the evening meal, I must be in the neighbourhood of this hut until 9 a.m. the next morning.

During the course of the evening a friend comes down to help cheat the weary hours. Incidentally I tell my friend that there is a rumour that the Captain will land at the wooden pier at eleven this night, as he is coming across from Leith in the M.L.

"Look here!" says my friend, "I bet you you won't tick off the Captain."

"What do you mean?"

"Just this. What's to prevent you marching down the pier—you're on duty, you know—when

you hear the M.L., and at the proper moment—you're not supposed to know that it is the Captain—letting go that kindly type of encouragement that might be expected to flow from a sailor roused from his beauty sleep to deal with some unknown trespasser on Admiralty property."

I tell my friend that the idea is good, and will receive my official consideration. I am prepared with neither promise nor bet.

The hours pass, my friend has gone, I have consumed much cake, sandwich, cocoa, etc., and reached that stage of repletion that will ensure my getting no sleep, not that I expect any.

"There's the M.L., Sir," says my section leader, and at the same time I hear the familiar 'jug jug' of the petrol engine, every moment becoming louder.

Full of stern determination that duty is duty and must be done, I grope my way down the wooden pier, reaching the end almost simultaneously with the M.L.

The psychological moment has arrived! Now or never! What then do I do? I hope that I have as much pluck as most people, so I do nothing. Stay! 'nothing' is incorrect. The awful truth must out. I help to tie up the M.L., and the Captain walks past me, with a genial "good night," on his way to Hawkeraig Cottage!

And what about you? I can't help wondering



THE MAJOR TELLS A TALE.

what you think of me. As I thought, you but label me a very ordinary coward.

Friend ! A word in your ear ! quite between ourselves, to go no further. I'm not at all sure that I should fancy myself in a mere contest of words with the Captain, even if you gave me three extra rings and an absolution from the Pope. He's an artist !

It is midnight, so I had better get one of my three visits to the sentry out of the way.

Up Heath Robinson's steps, to the higher level I must go, and it is dark as a coalpit. I have no torch. Surely my courage is vindicated ! Here is the true, the higher type of courage. That little incident of the Captain. Pooh ! What of it ! Great heavens ! What was that !

I start, stumble, and nearly fall over the brink, my skin atingle with terror. A moment's pause to 'sort' myself, and I am again the man !

What was the trouble about ? It was dark at the time, and it was difficult to judge of what happened. Possibly a rat. On the other hand, may be still some smaller member of the rodent tribe. The incident must now be considered to be closed.

I find that the sentry's insomnia is not near so aggravated as my own, fortunate fellow !

Into the listening hut again. To avoid treading

on the slumbering bodies of the section, scattered broadcast on the dusty floor, requires the agility of a sword dancer.

Why worry you with the detail of a sleepless night, of the fugitive irritation induced by day clothing, no sooner located than elsewhere.

You are so sympathetic that you will begin to feel for me.

One thing makes this watch nearly worth while. The early morning visit to the sentry—if it is fine.

I am no artist. I cannot give you the beauty of the dawn from Hawkeraig.

The range of tint from rose in the low east to the dark purple of the hills over against Burntisland, minute by minute diluted in depth, as the shafts of light that herald the rising sun lend transparency.

The sea is smooth as a pond, and the pearl grey mists soften the outlines of the colliers lying out in the bay.

The entirety is a picture that will hold you until a warning shiver bids you stay no more.

A further period of recumbent wakefulness brings the hour of seven, when you long to retire to the 'Forth View'¹ hard by for a bath and a

¹ The 'Forth View.' In time of peace an hotel. During the war it sheltered a goodly part of the ship's company.

shave. It is forbidden! You are a seedling undergoing the hardening process.

When at last nine comes, and with it morning 'Divisions,' you are free to go your way in peace.

SHORE STATIONS

THE shore hydrophone station was the principal *raison d'être* of H.M.S. *Tarlair*, who gave you your training at Hawkeraig. Be you officer, C.P.O., or P.O., your mind was moulded, as far as it could be, and your latent talents developed with the end in view that you should take your allotted place at one of the stations already in commission, or soon to become so.

They were impartially dotted round the coast of the British Isles, Ireland, and certain favoured spots in the Mediterranean—favoured by submarines.

Any number of tentacles, from eight to sixteen, felt their way seawards from the listening hut to distances varying from two to ten miles, where the ends joined up with the cumbersome tripods, containing the hydrophones, which, it was hoped, rested, as a well-ordered tripod should rest, on three feet, on the bed of the ocean.

When the stations were laid, it seemed to be convenient that the tentacles should be brought to the margin of the water, in a bundle as it were, and commence the process of radiation from there.

This course seemed particularly to be indicated, if the station was perched on the top of a cliff, cut by a convenient cleft or gully, that would offer some protection to the cables, as well as affording access to the shore for the station operators, possible if precipitous.

I said "seemed to be convenient." Well, I want to make this point perfectly clear.

If you have ever been out fishing in a small boat, when two or three lines are out at the same time, you will anticipate me. That those lines will eventually foul one another, is at least as sure a fact as Kepler's three Laws of Motion.

If Newton had been a fisherman, or even an hydrophonist, we should have had some such words as these: "Tendency of entanglement varies inversely as the distance of separation."

Now what about that as a statement in an elementary textbook on cable laying, or crochet work? Good, isn't it? Yes! I felt sure that you would like it. Oh no! It's mine, not Newton's.

Again, Euclid said that parallel straight lines produced indefinitely will never meet. It surely follows that parallel or even radiating lines, merely thought to be straight, will invariably meet at the first opportunity. It sounds common sense but it can't be, or else it would have been anticipated.

If you try lifting that cable for repair, or some

other purpose, you will soon find out what I mean. It is highly probable that just off shore you will come upon an inextricable tangle that will render the lifting of any particular instrument from the shore end distinctly difficult, and, mark you ! there is something malignantly fiendish about this tangle, as there is about most tangles ; you will find that it is not sufficiently inshore to be visible, even at spring-tide low water.

If the process of radiation starts straight away from the instrument, the result may not look so pretty, but it will be more serviceable.

The maximum range straight out to sea was obviously not more than the length of the longest cable plus the effective range of the instrument, with, say, 25 per cent thrown in for imagination. And this field would spread laterally on either side of that cable, roughly in the shape of a fan.

One doesn't, of course, know what the hydrophone thought about the whole show itself, but one could picture it saying to Fritz : " Oh ! You know I'm here, Fritz, well enough, so run away and play, but don't make too much noise, because father's got one of his bad heads again. You can monkey about as much as you like, fifteen miles from the house, and raise hell, and you won't wake Dad, but when the summer comes and the water's warm, he's going to turn



THE "CATCH" AT THE END OF THE CABLE.



COILING CABLE IN THE HOLD.

THE
END

out, and he'll swat you fine if you don't quit this damn fooling."

And Fritz probably knew where he was safe and where not, just how far out and how close in.

The limitation of the shore station was limitation in its most literal sense—one of distance, a sentry unable to stray beyond the limit of his beat.

So much for the broad principle.

Before getting on to the subject of station life there is just one other point worthy of mention.

It is a well-known and established fact of our British home life that a young woman has merely got to enter her name as a cook in the local registry to reap an unfair financial advantage over her fellow-domestics.

' Good plain cook ' is, I believe, the style under which she starts her licensed and nefarious career. Just these few strokes of the pen and the mischief is done !

I know little concerning these matters, and it may be that the word ' good ' is a purely moral testimony, which one might reasonably expect to go with the epithet ' plain,' assuming that the latter is used in a physical sense.

If, on the other hand, the description is intended to reflect on her professional qualifications, I say deliberately that they constitute a gross and wanton perversion of the facts.

The domestic, thus styled, is usually in-

capable of boiling an egg. Her training follows from this date, at the expense of her employers. This sort of thing was taken lying down by our grandmothers in the past, as it will be accepted by our granddaughters in the future.

The cooking at a hydrophone station was discharged by the P.O.'s, who possessed similar disqualifications.

At most of the stations they took it in turns, and there was quite keen rivalry in the art, for each one, as time went on, deemed himself to be a specialist in some particular dish. As in the case of the domestic, they learnt by long experience, at their own and others' expense. From nothing they passed on to an achievement of considerable, if limited, skill.

It would, I think, be readily conceded that conditions of life making for a very real and burdensome monotony, as was the case in many of the more isolated stations, could have been greatly alleviated by a close study of dietary problems, but were in fact aggravated by their neglect.

The fault did not lie in any way with the stations themselves, for the cooks and mess-caterers naturally rung the changes on their oft-repeated and very limited stock of ideas, born of inexperience, and the lack of resources in the neighbourhood.

From the point of view of hygiene and the

health of everyone concerned, the provision of a definite cook, with a definite and varied programme, though of necessity simple, would surely have been worth it.

At one station, at least, a method of 'don't-care' dieting assisted the deadly monotony of daily routine in reacting on the health and spirits of the entire staff. I heard the process described as 'going mouldy'—not the food, but the station personnel!

On the first day of commission, at one of our northern stations, the crew sat in council on the question of cooking. Much was said, but on the evidence being assembled one fact stood out firmly established, no one had any knowledge of the culinary art; of practice not an ounce, of theory as much as would suffice to fill the latest edition of Mrs. Beeton.

The passage of time, and the fact that the focal point of the palaver was 'food,' but served to intensify the prevailing hunger.

At last one of the number, more confident than the rest, volunteered to produce a rice pudding.

The necessary utensils were forthcoming. The operator filled a large saucepan three parts full with rice, to which he added about a quart of water.

The pan was placed on the galley fire, and an interested audience awaited developments.

Who has not read of one of those vast seismic

convulsions of Nature, from which is born an island in mid-ocean, where before was nothing !

Some mysterious power, uplifting and irresistible, has provided the cartographers with more work, the navigator with a fresh danger, and, in time to come, the collection of the small school-boy with a new postage stamp !

Well ! Some such irresistible and uplifting force got going on that rice. Slowly but surely suggestive of impulse not to be denied, it rose to the edge of that pan, while the water had apparently disappeared.

A large quantity of rice was, with great presence of mind, promptly removed, and more water added. This process was repeated nine times, and occupied two hours, at the end of which period it was considered that 'dinner' ought to be ready if it wasn't.

Imagine, then, a saucepan full of plain rice imperfectly cooked, and buckets full, of various sizes, in reserve.

In the words of that cook, both 'good' and 'plain,' that rice had 'riz'—or would she spell it 'ris'—a result which, I believe, is ardently desired in the preparation of pastry, cakes, and all goods '*ejusdem generis*,' and possibly even in the case of rice puddings—within limitations.

The early days of station life were productive of curious happenings in other matters besides those connected with the kitchen.

It was also at a northern station, and in the early and intensely enthusiastic days, when no one knew much of either the possibilities of the hydrophone, or its many limitations, but every one was ever so keen to learn.

At this station, at the time of the incident, there were only three instruments laid, and each was fairly close to the others. No. 2, for some reason or another, was on strike, and the order went forth that it was to be repaired.

For the purpose of testing the cable the station watch-keeper, a young and nervous individual, was instructed to abandon observation on all but the defaulting instrument, and, at the peril of his life, to concentrate all his powers of listening and imagination on it exclusively.

The hours passed—some of you who know wonder how they ever did pass—but never so much as a flick from the ever-expected telephone buzzer.

The repair drifter, apparently hard at work, could dimly be seen at anchor, through the haze, but soon the failing light shut her out from observation.

Becoming increasingly anxious, the station watch-keeper passed his time dismally speculating on the form the story would take, which was going to make the blame of a fruitless day appear to rest on him.

At last, out of sheer boredom, and regardless

of consequences, he turned the keyboard switch on to instrument No. 1. Not until then was it vouchsafed to this lad to realize life, in the highest sense of the term. Wild with excitement, pressing yet closer to his ears the telephone receivers, he listened in amazement, for plainly he heard the familiar strains of "God save the King!"

With trembling hand he seized the signal pad and dashed off the following signal to the S.N.O.

"Cessation of listening this afternoon has enabled hostile submarine to penetrate defences. A German band in submarine can plainly be distinguished ironically celebrating its success in proximity of instrument No. 1."

It was perhaps fortunate for every one concerned that the patrol sent out nearly rammed the returning repair drifter, at the harbour entrance, for, but for the mutual recriminations that ensued, it might never have been explained how the repair drifter had spent the whole day on the wrong instrument, and how, to while away the time, the crew had amused themselves on deck with a gramophone.

The humour of it all failed to penetrate the inner consciousness of the young watch-keeper, for to him it seemed that the Navy was not tackling the submarine problem with the seriousness that it deserved.

While on the subject of sounds, which may be heard both through the medium of air and water,

may be mentioned a fog signal in the Forth, which could be listened to clearly on the telephone receivers, and again by the ear unaided, after a distinct interval, proving that sound travels through water quicker than through air, in fact about five times as quickly.

I feel that you would never forgive me did I not now tell you that through pine it travels yet more speedily than through water. I am not referring to the murmur of the pine forest, so dear to the poet and the lover; that is quite a different topic, and no doubt more interesting.

It may be that here we have the reason why the box at a theatre commands the highest price. Through steel its progress is equally speedy, so, if it be true that facts talk, it is better to lock anything discreditable in your inner consciousness, rather than in your strong room.

A word of explanation. As you will no doubt conclude, I am merely passing on to you what was told me by my learned 'professor,' quite possibly, may I say, quite probably, inaccurate. Speaking for myself, I have no reputation to lose—scientifically, of course—so your acquiescence or otherwise is a matter of indifference to me.

Let me see. Shore hydrophone stations. Oh, ah, yes! Well, even if you were at a shore station your day probably had some beginning. I feel no actual certainty on this point, as one

day was terribly like the next, and still more like the one after that.

The question is, when did it begin? In one case which I have in mind it began when the person concerned actually got or fell out of bed, and without any further preparation attacked his breakfast.

I should like to have given you a plan to scale of the wardroom we shared, including two beds, wardroom table, one chair, with one of the beds serving as the other chair, and a totally inadequate washing apparatus for one. The whole room was little larger than a double bathing machine, and afforded but little more comfort.

The estate agent would doubtless have styled it a bijou residence.

Assuming it to be your twenty-four hours on, you were probably roused by the breakfast being laid. If, in your sleep, you were lying in graceful abandon, one of your arms occupied the proposed site of the marmalade jar, or the teapot, and the laying of the breakfast literally roused you, if it was your twenty-four hours off, well nothing on earth roused you.

Talk about the Housing of the Working Classes Act! And you paid rent for this kennel. Something was deducted to that end from your pay.

This morning you are late, for at 1.30 in the early hours a battery of 6-inch guns was justify-

ing to a tax-evading public the ammunition estimates, or a portion of them.

The concussion had not thrown you out of bed, but then a blow insufficient to crack the shell of a nut will not displace the kernel, for unless the shell breaks there is nowhere for that kernel to go. So it was with you.

If you are really interested, I will give you the measurements of self and friend, clad in summer sleeping suits, the few sticks of furniture, and the size of the hut, and if you have moderate intelligence and a pair of dividers the point will be clear.

Anyhow, you slept but ill, and you are late.

Breakfast! Well, breakfast will be much like other war breakfasts.

Man, I think, is by nature a dainty feeder. By dainty feeder I mean that he appreciates a dainty presentation of his viands. When untouched by feminine influence, I am sorry to say that he is either too ignorant or too indolent to make the best of a bad job.

Behold before you an enormous greasy mound of margarine, of irregular formation. It has assumed a definite 'striated' appearance. Day after day a careless knife has been plunged into this clotted lump, anywhere, anyhow! And ever a fresh pocket is quarried, and ever does the chemical formula of this unsavoury mess become more complex.

The deposit left behind by that knife ranged from glucose to cotton-seed oil, comprised almost all the acids and alkalis known to science, and before its demise it was thought by some that the nameless horror became radio-active.

If at that time the post of Home Office Analyst had become vacant, it was suggested that a competitive examination should be held over our margarine, on, say, the twelfth day of its appearance. Any applicant coming through the test with anything like success would clearly be the man to carry on the gruesome work.

What has all this got to do with crime? With the investigation of suspected bloodstains? Don't be in such a hurry, I was just coming to that. Well! no! on second thoughts, perhaps, no! I might put you off margarine. I should be loath to do that—I like butter.

Reader, you have guessed our secret. Some of us denied ourselves this nutritious food.

Why it was not divided into daily portions on the principle of "sufficient unto the day is the evil thereof" I do not suppose that anyone knew.

You are rather keen this morning to see the official correspondence. The fact is that for some weeks past you have sent a series of signals to Headquarters on the lamentable condition of your cables.

In the Service, as a general rule, the official notice taken of what a lieutenant has to say



H.M.S. PHOEBE.



"PORPOISES" READY FOR USE.

THE
END

varies inversely as the emphasis of the signal. However, in your case you happen to know that interest has been aroused. Did not that learned professor, with the beetling brows, visit your station on a tour of inspection a month ago? Yes, but he only looked learned, and that was last month.

You have sent yet another signal, and—yes, here was the reply.

“The matter is engaging the earnest attention of the Government.” Well, perhaps not quite that. Anyhow, in effect, the Authorities no doubt meant the same thing.

So on with your sea boots, and then for a scramble on the rocks with a couple of P.O.’s to see what you can do.

Sea boots. Just a moment! A word about those sea boots.

There’s going to be another war, so I should like you to be suitably equipped against the day, and incidentally to possess the kind of sea boot that someone will take off you at a price, after the whole show’s over.

How do I know that there’s going to be another war? It’s this way. A lady of my acquaintance, in whom I have the utmost confidence, told me so. She told me that she sort of felt that there was. She didn’t say when this war was likely to be, neither was she clear as to whether we should be engaged in it.

Hers is an opinion which it would be the height of criminal folly to take lightly. I will tell you why.

A few years back, a week before the Derby was run—at least I think it was before—she dreamed that a brown horse was going to win.

As a matter of fact I saw that Derby run, and am in a position to say that a brown horse did win, further that a brown horse was second and third, and also occupied other positions in the order of merit.

You see what I mean? How important it is. Just bank on what this 'clairvoyante' sort of feels. I've made you a present of her opinion. Get the right kind of sea boots while there is yet time, or you may be sorry.

I have the wrong sort myself, made of rubber, the sea boot of the novice, seen at its worst on the steel deck of a ship. There it may cost you your life, while on the rocks it will let you off with a ducking.

This morning, for instance, I am groping after injured cable on the rocks, covered by the teacherous bootlace weed. Two or three times a false step, followed by a slip, immerses me up to my collar stud, and the boot serves but to keep in and not keep out the water.

You get through your allotted task, repair the cable, only to find, on making a test, that the

serious leak is out of your reach, submerged even at low water, and it's up to the base after all.

The answering of the correspondence, the attempt at cable repairing, and some periods of listening on such of the instruments as were giving satisfactory results, would constitute an average day's work at an average station.

If you were situated in a busy area—busy for Fritz—so much the better for you. He kept you going at one end, and probably the S.N.O. at the other.

To one of the East Coast stations was vouchsafed a day somewhat out of the ordinary routine.

German battle-cruisers were bombarding the town, and the hydrophone staff were ordered to abandon the station. Shells were bursting all round the immediate neighbourhood.

Most of the party betook themselves to the sands, and tried to squeeze into the funk-holes left by the lugworms.

So great was the prevailing excitement that some time had elapsed before the horror of the situation struck the little party. One of their number was missing!

The heart and soul of the station had laid down his life for his country, when he should only have laid down his body!

Why, oh why, had he done this thing? Why

had he been taken from their midst, when it was so unnecessary, they almost thought foolish?

Theirs not to reason why, but to retrieve so much of 'Jock' as might happen to be left.

Hay dashed wildly back to the danger zone, and certainly felt that he had a grievance when he came across 'Jock' not only entire, but uninjured.

"What the Hades are you doing here?"

Just at that moment the station railings were twisted into scrap iron by a shell bursting literally at their feet.

"Looking for souvenirs," answered 'Jock,' "and by Jove here they are!"

And thence back to their anxious comrades, who had already determined individually how far they were prepared to go in the matter of floral tribute.

This little experience served as a kind of antitoxin against an attack of dry rot for at least a month, so said they all.

Messing together, sleeping together, in such confined quarters, day in, day out—I do not mean, of course, that sleep was universal throughout the day—provoked irritability, and a turn like the above had a beneficial influence.

The later stations were far more palatial residences: private dwelling houses with all the latest conveniences, golf courses, tennis courts, etc.

I was not at one of them myself, and never

felt certain whether the latter were laid out for the benefit of the former, on the lines of a sort of Frederick Gorrings Sports Club, or whether the former were really designed to combat Fritz, so far as that object did not interfere with a close enjoyment of these pleasaunces. And very nice, too, whichever way it was !

This chapter would not be complete without some mention of the means which the Authorities adopted, when they decided that the cables really had to be repaired.

Attached to the base were some eight or so armed drifters, drawn from the Scottish and East Coast fishing centres, specially fitted for the purpose of cable laying and repairing. A passing reference to these vessels has already been made in the introduction.

If your cables were out of order you just waited your turn in the queue, so to speak, until they had finished with the station next before yours on the rota, and, incidentally, you waited until the weather conditions permitted these small craft to get to you, and further to commence operations, which always demanded moderately decent weather.

Although they exercised considerable judgment in the estimation of the weather factor, it was now and then possible to be caught at sea in something very unpleasant, and at least two of them were lucky not to go on the beach.

Nice quiet number though, and surely more interesting than the hydrophone shore work. Ask one of their C.O.'s about the supposed U-boat off Blyth.

In connection with these drifters I may be pardoned, I hope, for mentioning an incident which involves a 'burning' question.

One of these vessels had tied up alongside a large collier in one of our great naval bases.

We were short of quite ten tons. Picture, then, this huge collier towering over our little packet. Picture also a leather jacket hose through which coal is mechanically forced at an enormous rate. The vents to both starboard and port bunkers of the drifter are but little more than fourteen inches in diameter, in fact, similar in size and shape to those feeding a private house.

Owing to the disparity in size of the ships, the collier's hose inclined at an angle to our deck of sixty degrees, and shot the coal at the fourteen-inch target from a height of at least twelve feet.

What happened is nothing more than what would have been expected.

I say emphatically that not less than two tons of coal bumped, crashed, or in the first instance fell overboard into the sea.

And so it must always have been when a ship of our size coaled from such a collier.

Ah, but you've forgotten the saving of time and labour!

Just now I intimated that this chapter would be incomplete without mention of these drifters.

Oh dear no! I never suggested for a moment that completeness would follow the mention, in fact I never even hoped it. The fact is that I don't know absolutely all there is to know about shore stations, for I only spent a fortnight at one. Why, then, the impudence to attempt this chapter?

Reader, again you forget that promise.

Knowing so little about it, I simply cannot stuff you up with a whole heap of dry technical detail, and what is more I promised that I wouldn't.

What if someone else had written this chapter? Well, he certainly would have gone further, and, reader, you might—I only say you might—have fared worse.

RED CROSS WEEK

Now every twopence overpaid
Provides an egg that's newly laid,
For hospital consumption ;
So hearing of the coming fête,
The local poultry toiled late,
And laid on that assumption.

WHAT is a Red Cross Week ? Let us begin at the beginning. In the first place, as often as not, the term is a misnomer, for the week lasts a fortnight.

Be it a week or a fortnight it is obviously a growth of the war, and may be described as a period during which every conceivable act of plunder is considered legitimate because (and this must be freely allowed) the cause is the greatest that can be. Ours was no exception to the rule.

I do not quote any figures. I am not able to do so, and, besides, you know what they say of figures, that they can be made to prove anything. Personally I hate that sort of thing. To prove something is just about the last thing on earth that I really want to do. At once you get someone fooling around to prove that you haven't proved anything after all. No, no ! I would

much rather make a rash, unwarranted statement. By 'unwarranted,' of course, I mean what the other people think is 'unwarranted.'

As it seems to me, then, the ideal after which you strive in these cases is to spend twopence and make a penny. If you succeed in this aim you are entitled to shower congratulations on yourself, and upon all those concerned, and every one, of course, is supremely satisfied, and why not?

You erect marquees; you saw up timber—a forest of it—into such lengths as will make it a matter of certainty that they will be entirely useless for any purpose whatever after the week is over.

Do not imagine that timber is the only scarce commodity that suffers mutilation. Oh, no! Include everything on which you can lay your hands, and take care that you spoil it.

And what is there to show on the other side of the ledger?

You had better come with me and attend a committee meeting of 'ways and means' held in the large lecture hut, with the Commander in the chair. 'Chair' is used in its technical sense. As a matter of fact he is perched on the lecturer's desk, arms folded, legs swinging, facing an expectant audience.

"Where did we get that chocolate last year?"

Voice from the back, "Browntree's, Sir."

Commander to 'Bishop,' the undisputed Red

Cross Secretary. "Bishop, just write a line to Browntree's, something like this :

"DEAR SIRs, —You were good enough to send us last year for our Red Cross Week twelve bars of chocolate. The week was such a success that we propose to hold another this year, commencing July, ——.

"There was a distinct run on your chocolate, in fact, it was hardly less successful than the week.

"On looking into the matter we find that we have none of it left. We should, therefore, be much obliged if you could see your way to repeating the gift.

"You will, we feel sure, be at one with us as to the merits of the cause. We enclose one of our 'graphs.' The plotted curve indicates the steady increase in demand for your wares.

"Yours faithfully."

This is a specimen of several letters which are indited and despatched, and which may or may not bring grist to the mill.

The result is a vast incubus of correspondence and a few pounds of cocoa, chocolate, acid drops, etc.

Just think, though ! You have some stuff to unload, for which you have not paid, nor will have to pay. What a glorious reflection ! Good

business again you think. Yes, you are right. Of course it is.

Your outlay, too, big though it may be, will turn out after all to be only a book entry.

The next thing to do is to arrange that the ship's company have a change of routine. Do them good! Some of them are looking a bit stale.

Are there not stands to be erected, scenery to be painted, committee meetings to be held, and a hundred and one other things to be done, requiring a goodly number to do them, and at least an equal number to look on and get in the way?

War on! Is there? Well, in these times every one and everything has to bide its turn in the queue, so why not the War?

As I say, you are satisfied, you have begged a small portion of the gear you need, and you have pinched the rest, but mark you for that rest—and it is a very big rest—someone has to pay. *Vide* the book entry on someone else's books. You feel rather like the ostrich who forgets about the rest of his anatomy, when his head is buried in the sand.

One item required for a certain function during the week was the toy balloon, and, of course, in these days of aeronautical enterprise it was only right that it should be filled with hydrogen.

The day of the function had arrived, but not so the hydrogen cylinder.

Following the principle above stated to its logical conclusion, it was obviously worth any expenditure to get a cylinder, no matter if the cost—to someone—exceeded the price realized by the toy balloons. You follow me. Excellent!

I see that you have already grasped the lines on which charitable enterprise is run.

Let us assume that you have been chosen to get this cylinder. Just think of it!—not the cylinder—the excitement of the search.

As directed you put to sea in the motor boat and board H.M.S. —, an ex-Cunarder (alas, she is now submerged!) After explaining the object of your mission to so much of the Navy List as is represented on H.M.S. — you go empty away. H.M.S. — has no hydrogen, never had any hydrogen, and never proposes to acquire any hydrogen.

Why couldn't they tell you that at once, instead of keeping you kicking your heels for twenty minutes?

Don't be so silly! Why should they? Think how undignified it is to be in a hurry, how foolish people look when they're in a hurry—some people.

As just mentioned, all this has taken time; the precious morning is ebbing, and so is the tide, and further, the function begins at 2.30. What are you to do?

Have a cut at the Dreadnought flying the



RED + WEEK.
One of the ships visited.



RED + WEEK.
Returning the empty cylinder.

TO THE
AMERICAN

yellow flag. Strictly speaking, of course, you ought not really to be allowed on board, for she's in quarantine, but—well, you would cheerfully risk rabies to get that cylinder of hydrogen, and it may be that it's not quite as bad as that.

She's the nearest ship, so off you buzz. A breezy young lieutenant takes you in tow, leaves you in the wardroom, and goes off to enquire about the gas, what time you are being entertained by such of the officers as are off duty for the moment. A quarter of an hour elapses, and the lieutenant returns.

“Sorry, I find we have no hydrogen, but I can let you have a cylinder of nitrogen, which should do almost as well.” The wardroom company seem to concur in this view, at any rate no one dissents.

Who are you, a visitor and a suppliant, that your voice should be heard in such a brilliant throng of lieut.-commanders and lieutenants, R.N. You are silent. A still small voice within had doubtingly whispered to you, “I thought nitrogen was heavier than air.” Nobody knows better than you how antiquated is your chemistry, so if nitrogen was heavier than air in your time, it is very evident, under the new order of things, it is not so now.

You merely express polite thanks, and off crashes the obliging lieutenant to collect the cylinder.

Enter Commander. "What's all this about hydrogen? Who wants it?" The circumstances are explained yet once more, and you come under the unwilling notice of this omnipotent person. The lieutenant is recalled.

Commander: "You fellows are pretty wet. Do you mean to say that you didn't know that nitrogen was heavier than air?"

Farewells, regrets, and renewed votes of thanks, and back to the motor boat. The coxswain tells you that there is not enough petrol aboard to carry on west of Inchcolm, where the fleet lie.

What is to be done? Course is shaped for H.M.S. — (the first ship visited) where six cans are borrowed.

"How shall I enter up this petrol?" says obliging lieutenant.

"Oh! Experimental purposes," you bellow, as the little motor boat almost drowns the words, throbbing with the consciousness of renewed vigour, as she dashes off again on her further voyage of exploration.

Picture that chafing impatience that would squeeze an extra knot or more out of that little engine, if it could.

Precious time has been wasted, and nothing has been achieved beyond an elementary lesson in chemistry. It is too exasperating for words!

How near that huge camouflaged hull seems, but what a time it takes to get there.

Again a blank is drawn on H.M.S. *Furious*, after the same routine has been observed and twenty more minutes of time, ever becoming more valuable, have been wasted.

Oh yes ! They used to have it, but for some reason or another (does it really matter what ?) they haven't any now. You are advised to try K.G. 5th.

It is becoming rather an effort to sustain the cordiality of your thanks, but you do your best, and off again.

You do not try K.G. 5th, but draw a bow at a venture on your own, and board H.M.S. —, determined to throw in your hand, if you don't succeed this time.

Again you go through the same old tedious formula of explanation, and—wait, comforted by a cocktail in the wardroom. Another wait, and, incidentally, another cocktail, which takes off the edge of your chafing impatience, and tones down the prospect of disappointment.

I like this ship, you think, and if they don't let me know about the hydrogen soon, I shall be quite prepared to stop the week-end here—if they ask me.

Elated lieutenant returns. "We have a cylinder of hydrogen ; I've told them to put it in your boat. Have another cocktail ?"

You make the obliging lieutenant quite embarrassed by the warmth of your thanks.

"How shall we enter it?" This from the lieutenant.

"Oh, experimental purposes."

You are advised to get a move on, as H.M.S. — is going out on a stunt, and is already weighing anchor.

Nursing your iron baby you return late, hungry, and triumphant. Late. Yes! but perhaps in time, for at 1.30 you reach your base and report to the Captain, who expresses himself well satisfied.

You then run into the superior officer who sent you, on his way back to lunch.

"Is the Captain pleased?" His first question.

"Yes," you reply.

"Capital. . . . I knew that a man of tact and address was wanted on that job, that is why I sent you."

You are old enough to appreciate the praise, but at the same time not to swell too much, for you know that it is the Captain's pleasure that is paramount. Had you been unable to say 'yes.' . . . Well, well, why pursue the matter further? After all that is another story. You talk as if you had met trouble half-way, whereas it was a most complacent superior officer that you met. Good for you!

The kids were not disappointed over the balloon question. How much did you spend on the petrol? You didn't spend any-

thing? 'Experimental purposes' footed the bill.

Good! Now you know how it is done.

This is but one instance of the many tasks that might fall to your share during Red Cross Week.

After all, even pleasanter than the quest itself was the sight of the children with their balloons later on in the day.

The dramatic performance consisted of three one-act plays: 'Q,' 'The tabloid,' and 'The bathroom door,' and drew a good house.

The part of the broken-down actor in the 'tabloid' was splendidly sustained by 'Kelly.'

His comrade in the piece—if you can use the word 'comrade' of one who has done his best to murder him—found his style severely cramped by the fact that, at the crux of the action, while 'Kelly,' foully murdered, lies dead—so he thinks—on the floor; the door, which should have admitted the villain's horror-stricken friend, failed to open! It was an awful moment! Surely a real murderer suffers less, or at least no more.

At last a violent kick, and the flimsy framework flies open, and the situation is saved, just in time! and the piece flows on to its logical, or rather illogical, conclusion. No matter, everyone was amused, or said they were, and what is more, they could not get their money back.

‘The bathroom door’ was a most amusing little piece of absurdity, and kept everyone in convulsions and produced capital acting, while ‘Q’ was as weirdly, wildly, and entertainingly impossible as is anything of Stephen Leacock’s.

As the orgy lasted a whole week, it follows that there were other shows besides the dramatic.

One afternoon gave us a capital concert, and three nights were devoted to ‘movies.’ On at least one of them, in addition to the attraction of the world-famed ‘Charlie,’ you had the midshipman in a box—courtesy title—armed with pieces of what passed for chocolate at that stage of the war, bombarding his friends below, who were never to endure a dull moment. He was almost bound to hit someone he knew with every missile.

At last the fête day arrives—Saturday. All that has gone before is but a curtain raiser. The fête is the piece.

A squadron of aeroplanes, from the neighbouring station, hover over the golf course, which has been chosen as the site of the gala. They don’t know what to make of it. Has that long-delayed landing of the Huns really come off at last?

Their appearance is distinctly menacing, this is what they probably think. From their ever shifting view-point they make a complete survey of the terrain below. Panicking groups are aimlessly darting about hither and thither.

Here perhaps may be seen a stalwart staggering under the burden of a huge signboard with which he has levanted, while the Commander's back is turned. This is going to serve as an advertisement of the goods he intends to purvey, or the feat of alleged skill over which he is going to preside. He is steering an erratic course N.E. by E., hoping to rendezvous at a certain time and place with a comrade who has been told off to commandeer the bludgeon with which to coax the stake into the brick-baked ground.

This comrade is at present engaged in a heated argument in a remote corner of the landscape, with a rival stallholder as to who has the prior lien on the bludgeon.

Assuming the argument to be terminated in twenty minutes,¹ G.M.T. being 21 h. 15' 27", and the variation of the compass to be 8° 17' W., what course must be set, and what speed must he make to rendezvous with the holder of the signboard, assuming the unlikely premises that he emerges successfully from the present action, and is sufficiently powerfully armed to retain possession until he makes his base ?

This question need not be answered. It did not arise. Somebody pinched the signboard.

At last the aircraft are satisfied that the panicking is unconnected with anything so trivial

¹ G.M.T. = Greenwich mean time.

as a mere hostile landing, and they melt into the distance in concerted diminuendo.

Put on the clock four hours, and assume that chaos has been converted into order.

Crowds are pouring in. The fête has begun. Where shall we go? Let us watch this group of lusty matelots from the *Tiger*.

“Roll, bowl, or pitch! Who’ll have a shy at the milky cocoa-nuts? Cigars or nuts! All you hit, you have! Equal to wine! Fags or photo frames! Come on, boys!”

This is too much for the matelots.

“’Ere, Bill, what about them nuts? Shake a leg!” And for ten minutes or so the cocoa-nut stall does a roaring trade, but perhaps the stallholder is not altogether disappointed when the crowd pass on to the rifle butts, or the goal-shooting competition; these fellows soon find the range, and hit as often as they miss.

Just then an appalling din assails the ear. You go to investigate, and you are caught. You have to make the attempt to drive a nail into the Kaiser’s coffin.

A word about this delectable occupation.

The idea and construction are the midshipman’s, they would be.

Imagine a solid piece of elm, coffin shaped and armoured with zinc, bearing on the lid a burlesque representation of the Kaiser. Imagine in your hand a four-inch nail and an absurdly

light hammer, and twelve other co-competitors.

“ All ready ! ” This from the Snotty. “ Go ! ”

He or she who first drives a nail home, within a specified time, wins a prize.

Just next door is the putting competition. You smiled as you thought of the golfers you knew who are put off their putt by the noise of a worm throwing a cast, two hundred yards away.

Think of a gang of rivetters in honour bound to complete a job. It is 12.45 on Saturday. The job is but half done, but the men do not mean to miss the soccer match or dog fight to which they are pledged. Raise the noise that they would make to the power of ten, bring it right up against the ears, and you have some conception of the row the Snotty made.

In the intervals he would bellow encouragement to the shy maidens that always hover round a midshipman, to come and chance their luck. All of them had to come. If not of free accord, a petty officer was told off to apprehend them. No one was spared. Be you under the rank of Vice-Admiral, and you had not the slightest chance of escape.

Suffering from aggravated shell-shock you totter away, and turn to the sports, which are now in full swing.

You are not destined to get there, at least, not

yet. You find yourself absorbed by a crowd gathered round—well, what is it? Just listen.

“I’m giving money away to-day, ladies and gentlemen, simply giving it away, that’s why I’m here. Money for nothing! You say I ought to be giving it to the Red Cross? Well, I’m not, I’m giving it to you instead. ’Cos why? Because I’m really fond of you. Money! Much of it in a moment! The ladies’ latest chance.”

You press through the dense throng to see who this rare philanthropist may be. There you glimpse a gesticulating enthusiast, half yachtsman, half bookie, satchel on his back, hand jingling the hidden wealth therein, voice raised in raucous exhortation, none other than—well, never mind!

At his feet a pudding basin, in his other hand three ping-pong balls.

For a shilling you may make three essays to cause one of those ping-pong balls to come to a state of perfect rest in that pudding basin. I can tell you now that you won’t succeed, but for the matter of that I can tell you now who won the war.

How bountiful his largess may be gauged from the fact that he took fourteen pounds and paid out three shillings, but then he had the master touch, which is not given to us all.

Outside the entrance, the close of day found

him trapping those homeward bound who had hitherto escaped.

You pause to admire a purchase just made at the fancy stall by 'Jimmy J,' a pair of alleged silk pyjamas, price two pounds ten shillings. You heard afterwards that a competent feminine opinion instantly condemned them as cotton. Even you could have told 'Jimmy J' that he might hardly hope to cover his colossal framework in silk for fifty bob, at least not at a bazaar. I shouldn't have put it like that! I mean not with a purchase made at a bazaar. The penalty of being so large!

Never mind. No doubt he looks very nice in them.

The sports at last, and the star turn at that, the tug-of-war. You study the physique of some of the combatants, and breathe a devout prayer of thanks. You yourself were nearly on in this act. It was you who were getting up the team from the ship, but the entry was vetoed by the Commander.

What a kind, thoughtful man! Just look at that fellow there! You could picture Hackenschmidt being down and out against this man before the lady spectators had made up their minds whether they would be too hot in their furs.

Oh, indeed, you have had a narrow escape. The smallest man in the winning team is about the size of a landslide.

What sort of show would your average of thirteen stone have put up against this ?

Your feelings towards the Commander become more mellow than ever they were before.

The foot races mildly amuse you. By the way, why is it that a moderate runner never can make out how it is that he comes to be beaten ? The most obvious reason, that the man just in front of him is just better than he, is the last explanation that strikes him as being true.

They are over, and your quiet meditation is interrupted by the cry, "This way, this way ! Come and guess the weight of the chicken that spent a short but happy life under the loving care of the Commander."

Who are you that you should rob another of that chicken, who is probably both hungrier and greedier than you ? You guess wrong, and the bird is another's.

A moment's delay, just to pinch the chicken — I do not mean to take what is not yours, simply to squeeze it, caress it, as it were. It lends the connoisseur's touch, all the really best housewives do this thing — and on you pass to the lucky tub.

You know, of course, what a lucky tub is. You plunge your hand into the bran and grope, and when you think that your object in life has been attained, you fish it out, and find, if a male, that a pair of doll's socks are yours, while if you

are of the gentler sex, you will doubtless bring to the surface a shaving brush.

They say that the hidden hand may be successfully piloted by another engaging it in gentle pressure beneath the opaque surface of the bran. This rumour is given for what it is worth. The idea should be scouted that this method was employed by us. I have heard it suggested that it isn't even quite nice. The matter is a difficult one on which to pass an opinion off-hand, but I should have said that how nice it would be would depend on—the hand.

What has this merry blue-eyed official to say? "Now, ladies, this way, all the latest season's novelties," and the blushing maiden has six-penn'orth, and pulls out something which she hurriedly hides, and takes home to store in her bottom drawer against the happy day.

You have shot at the rifle range, and also at 'Taffy' in goal. You are likely to remember the latter fact. You are wearing rubber-soled tennis shoes. You know that you have broken one of the rubber soles, while you only think that you have broken one of your toes.

You have thrown at cocoa-nuts. An aching shoulder might be taken as evidence. You have hurled every type of missile at every kind of target. You have gone round the putting course until you are giddy, and you have put what you

trust is the last nail in the Kaiser's coffin. What else remains for you to do? Nothing! You heave a sigh of relief that you have reached the end of a perfect day.

You turn out your pockets and find numerous 'chits' purporting to be receipts. I will tell you what these are, and then how it is that I know. They are receipts by the Paymaster for money taken at your stall, and handed to him.

How do I know? Can I read the writing, if writing it really is? No, of course I can't. Oft have I seen our Paymaster making strange signs on paper in green ink, similar to these 'hieroglyphs' before me, and—well, I simply put two and two together. It's deduction, my dear Watson, deduction.

And so off to home. The day and the week have pleaded the principle, and not in vain:

Give all thou canst,
High Heaven rejects the lore
Of nicely calculated less or more.

Now that it is all over I am compelled to abandon the premises with which I started. I am compelled to acknowledge that the week was a splendid success, and splendidly organized.

Why didn't I say so at first?

What foolish questions you do ask! For the

simple reason that if I had I should never have achieved this chapter, at least not in its present form.

Enough ! Let's get on with the war !

PETERHEAD

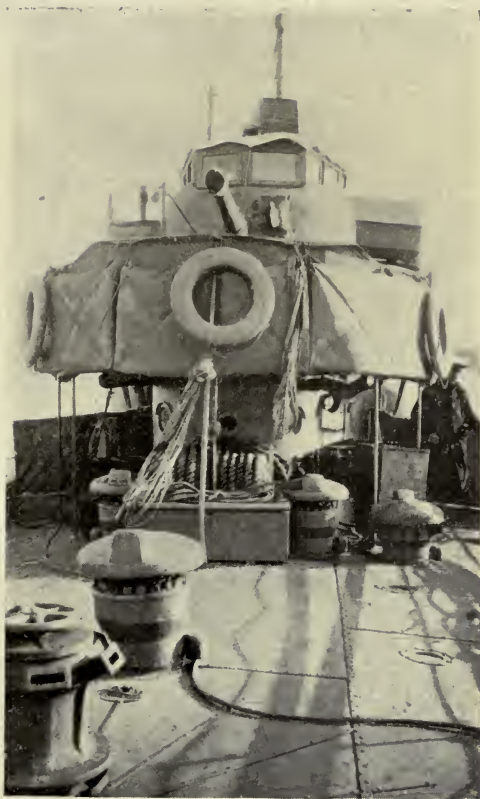
If set you be, to take the sea,
Good counsel—mark you mind it!—
Not yours to care, wind foul or fair,
Just take it as you find it!

DURING the month of July, —, the Captain had brought to the required degree of perfection a directional hydrophone which might be used by a vessel under way, in other words, the ‘porpoise.’ Who were the Godfather and Godmother who gave it this name, I know not. Anyhow, it surely was as appropriate as are names usually.

The enemy had no certain knowledge of the fact, but it was not long before the Admiralty were aware that there was a suspicion over the other side, as a copy of an offer of a reward by the German Admiralty for further information on the point was captured by one of H.M. ships.

On August 18th H.M.S. *P. 33*, with the Captain, ‘Jock,’ and three hydrophone petty officers, and H.M.S. *Dee*, with the Commander, the sub-lieutenant who never smiled, and a further three hydrophone P.O.’s, set sail for Peterhead, which was to be the base of operations.

The ‘P’ boats, products of the war, are curious



THE LISTENING ROOM WAS IMMEDIATELY ABOVE THE SEAMAN.



H.M.S. DEE.



craft, designed for convoy work, and attack on submarines. Their oil-driven turbines give a speed of twenty-five knots, under favourable conditions ; their shallow draft makes them an illusory target for torpedo, and their four-inch armament and powerful ram, a formidable opponent for Fritz, and further, when viewed stem on from a distance, they are not unlike submarines.

At Aberdeen P. 33 was always known as the submarine cruiser. " Hae ye seen the submarine crusier newly arrived in yon dock ? " you would hear.

Dee, of more familiar type, at least to the Aberdonians, was an obsolete destroyer of the river class, coal driven, and also capable of twenty-five knots, but only carrying an armament of twelve pounders.

The heroine, she was, in company with *Exe*, of the typhoon off Shanghai in 1905, so graphically described in Admiral Cradock's book, *Whispers from the Fleet*.

Less than an hour aboard *Dee* sufficed to show the sub-lieutenant what his welcome was to be, and the new comradeship was cemented in the usual way by something strong in a glass.

No. One holds up his half measure and views it critically :

We want but little here below,
But want that little strong.

What's this ?

Steward : " Can't help it, sir, running short."

No. One's adverse comments are impartially bestowed on the Mess President's thrift and his fellow-officers' thirst.

To steward : " All right, carry on ! " Exit steward.

" Well, here's good shipmates, chin-chin to the porpoise, good hunting, and everlasting hell to Fritz."

Then followed a clear run to Peterhead, and a complete new set of sensations, fairly commenced.

I wish I could tell you how the natives pronounce ' Peterhead.' No ! It's no good. You can't learn golf from a book, neither will you learn ' Peterhead ' from me.

If ever I write a textbook on geography I shall have to use some such words as these.

" Peterhead is noted for its grim convict establishment, which dominates the harbour, for its golf course, for the totally unsuitable and insufficient welcome that it extends to incoming ships in the way of anchorage, and lastly for its Palace Hotel."

Palace Hotel surely presupposes a palace, and a palace a king, or a queen.

Out of charity I should like to step back into the dim past and grasp the king firmly by the hand—gently, if a queen—and say : " Put it there, sire "—" madam," if a queen—"shake ! You have



THE COXSWAIN H.M.S. *DEE*.
Observe the depth charges.



"SLOP CHIT" DAY, H.M.S. *DEE*.

THE
END

my sympathy, the words unspoken mean the most, I can say no more." Perhaps, after all, it was but a country, and an undesirable, residence of some such individual as Robert the Bruce.

As an hotel 'yes,' I distinctly think 'yes.' Most comfortable, and all that sort of thing. Besides, it might well be that entrée to the hotel was easier than to the Palace.

As a palace ! My word ! Well, what a funny place to put a palace !

The present reigning monarch is the R.A.,¹ and I can assure that the dynasty has suffered but little loss of power as viewed through the spectacles of a sub-lieutenant R.N.V.R.

On the subject of Peterhead generally, there is one point on which I feel quite clear. The person who compiled the lucid Admiralty treatise on Navigation, with its chapter on the law of storms, has only to visit Peterhead to realize that that place, like Herr von Bethmann Hollweg, knows no law, and then, if he is the man I hope he is, he will go into a second edition right away and cut the loss on the first.

At Peterhead it blows every day of the week and twice on Sundays. At least, during August, September, and October, —, the weather was simply awful, and I don't see how Peterhead can put up the plea of the late German Chancellor, 'Necessity.'

¹ Rear-Admiral. The Senior Naval Officer of the Base.

The first night in the ward-room was amusing, at any rate it seemed to amuse those to whom it was described, so it must have been amusing—to them. Fortunately it stopped short at that stage, though it might well have been otherwise.

The sub-lieutenant being, as it were, a pariah, had no cabin, and shared the ward-room with Snotty.

Sleep, as was natural, was long in coming; there was much that was new to think of, and midnight found him still awake, but with a consciousness of oppression in the air and a difficulty in breathing.

No matter, thought he, this is only what these brave fellows have to put up with. Another half-hour and the throat and eyes were affected.

It's stiffer life that I imagined, perhaps after all. . . .

Yells from the Snotty: "Good heavens, I'm suffocated!" Note the words, "I'm suffocated."

Not a word about the sub-lieutenant, no note of solicitous enquiry. Well, well! Of such fashion is human nature.

The sub-lieutenant is intensely relieved, as he realizes that he is not so soft after all.

The ship's lights are out, but a match is at last struck. The two cannot see one another through the wall of fog, they can merely sound-range one another's gasping remarks.

A cushion is found to be smouldering and, when taken on deck, bursts into flame.

Carelessness, a cushion, and a cigarette end !
From thence onwards peace !

The occasion was tea in the ward-room, two or three days later.

“ Give the wheat a fair wind,” said the Captain, and he got what he wanted, the bread and margarine. It may have been this chance piece of naval slang that brought the conversation round to the subject of storms.

I don't know, and if I ever did, I have forgotten. Anyhow, the subject did come up, and all but one had something to say. The Captain of one of those terrible typhoons in the China Seas; No. One¹ of something encountered nearer home; but no less fearsome; the Chief² and the Gunner² of thrilling happenings in the Bay and the Gulf of Lyons; and then the Snotty of one wild winter's night off the Faroes.

The sub-lieutenant took in everything, no detail escaped him; now and again a touch here and there seemed to have been put in in too neutral a tone, and questions had to be asked before he was satisfied that the yarn was incapable of yielding further thrill. It was all new and immense.

¹ The Senior Executive Officer after the captain of the ship.

² The Chief—Chief Engineer. The Gunnery Officer (Gunner) like the Chief, usually a Warrant Officer on a small ship.

Stories he had heard, and who has not, of seas like mountains, but read they had been, not recited, nor brought home by gesture of one who had lived through such, was in fact living it again for the moment, and by its very reality had power to make his listener feel it too. It was next door to the real thing. The simple words carried conviction.

Then the sub-lieutenant was told that it was his turn.

"Fire away, get on with it!" This from No. One, grinning.

Of necessity he remained silent. "Capsized on the Cam." No. That wouldn't do at all. It was quite out of keeping with the seriousness of his mood.

What did he know of dirty weather, of heavy seas, of the almost unspeakable discomfort of it all, of the fight that must be fought, and of the thing that mattered most, if you lost! The hand of Death outstretched in desperate endeavour.

He had seen a stiff sea off the Channel Islands, and at the time had thought a good deal of it, but now he wisely held his peace.

Nothing much had been left unsaid on the subject, and the ward-room seemed to be positively charged, as if it were in the trough of a V-shaped depression.

Someone asked the question: "What is the

glass doing ? ” It was the Captain who answered “ dropping fast.”

It seemed to the sub-lieutenant as if a note had been struck. The answer was pregnant with omen. He glanced round the table to see how the others took it. One and all of them were supremely unconcerned.

He found himself marvelling. “I have the wind up,” he thought.

In a sense he was right, he had ‘ the wind up.’ He was in that same imaginative, self-suggestive condition that anyone can get into who is foolish enough to read a medical book, or unfortunate enough to find himself surrounded by a party of medical students thrilling with the morbid horror of some gruesome operation or loathsome disease. It was the unknown in either case that stimulated the mind.

Tea was over, and at the invitation of No. One, who happened to be officer of the watch,¹ he went up on the bridge. Strictly speaking this was contrary to Service regulations, but I am telling you what happened. I suppose that No. One in mitigation might say that the wish to get there was so strongly expressed that he was torn between duty and hospitality.

¹ The normal watch lasts for four hours. The exception is the ‘ dog watch,’ 4 p.m.–8 p.m., divided into two parts to obviate two officers, keeping watch and watch, always having the same periods of duty.

From the vantage of the bridge the broad expanse of sea inspired confidence.

The waves lapped gently against the side of the ship with a suggestion of caress, and threw back the fire borrowed from the setting sun. The whole aspect was one of infinite beauty, and to the sub-lieutenant there seemed to be no prospect of immediate change. The sky, or such part of it as was not veiled by light clouds, showed a pale green rather than blue, you know the tint I mean, a fact which brought comment from No. One, "That sky means wind, it always does."

"Shut up!" was the only answer he got. The effect of the tea-table conversation had worn off, and the sub-lieutenant was not to be argued out of an appreciation of the peaceful scene.

The watch, technically known as 'the first dog,' passed quickly.

The chief topic of conversation was sea life under war conditions in all its varied aspects. The shades of distinction between R.N. and R.N.V.R., a most controversial subject, on which No. One had much to say.

This subject is quite worth debate in a ward-room, and if things are a bit flat they will be brisked up, I do assure you, and while you are about it go the whole hog and drag in R.N.R.

Back again to the ward-room, this time alone, and at a loose end, nothing to do until dinner,

unless playing with the ward-room kitten can be called an occupation.

The game was not a success, it was far too one-sided ; puss, accustomed to play the most lively pranks, was quite out of form. The sub-lieutenant exhausted every artifice to stimulate her interest, but all to no purpose. A gentle scratch on the wicker casing of the stanchion, hitherto always known to draw, sooner or later, was a dismal failure to-night. Puss was listless and had nothing to say to her new friend on this occasion, whose feelings were sadly hurt.

The incident was trivial enough and seemed to have no further significance beyond making the interval before dinner drag. In the light of after events no doubt it had a meaning, which, in conjunction with other signs, might have been read by one possessed of the requisite sea lore.

One by one they drift in to dinner, and wait for the Captain *Note*.—Don't begin to satisfy your own needs until the Captain puts in an appearance and is well on the way with his own.

“Wind freshening,” is Chief's first remark. He always was a Job's comforter, but with such a cheery way of imparting unpleasant information, that the trouble was robbed of half its power to harm.

Everyone manages to put the soup where the steward meant it to go, so that sub-lieutenant doesn't think that the warning need be taken

too seriously, particularly as it comes from Chief.

Conversation was inclined to flag. Fritz hadn't put in an appearance. It was annoying! The Admiralty had said quite definitely 'when' and 'where,' and like Cæsar's wife, were above suspicion. No, the fault must be looked for in some other direction. So it was up to Fritz; he hadn't played the game, and the sub-lieutenant suffered in consequence. He became the butt of such wit as there was to spare, for in a sense it was his funeral, as the hydrophone officer; for the porpoise stunt had definitely begun, in fact this was the second trip.

It was a relief to him when the meal was over.

What a change in a short time. He shivered as he turned up the collar of his 'lammie' coat. She had begun to roll, and it was obvious that the wind was freshening.

'White horses' chased one another from the S.E., and the sea had lost that ultramarine tint. The wind was playing a mournful dirge on the wireless aerials, in tune with the altered conditions.

Colder and colder, and fresher and fresher it became, and the change could be measured in minutes.

From this time onwards events moved with startling rapidity, and at nine o'clock it was blowing so hard that there came the wireless

signal from P. 33 that the stunt was off, and course was altered for the base, though, as yet, there was nothing in it beyond the fact that the conditions no longer favoured hydrophone work;

At the hour of ten it was evident that a nasty storm was brewing; stronger and stronger blew the wind, and higher and higher mounted the sea.

It was a grand sight, and by midnight had surpassed anything that the sub-lieutenant had deemed possible. At times irresponsible masses of water sped on their way whirling through the air, literally torn from the sea by the mad violence of the gale. It was the real thing, a pukka storm.

He stood under the lee of the ward-room companion hatch, holding the rails, and peering into the darkness.

The ship's lights, darkened though they were, sufficed to show all that was necessary to bring home the grandeur of the scene, and there he felt that he must stay, half blinded though he was by the drift, and almost torn from his hold by the power of the shrieking wind.

Nothing could he hear save when a sea, heavier than before, broke over the ship in a swirling mass, hissing on its way across the waist, and showing up with a dazzling brilliance almost uncanny, as it leapt at him out of the darkness.

The ship, that but a few hours before had

seemed so stable, so incapable of any emotion, shivered from stem to stern, as she half rode, half ploughed through the mountainous sea, and fell into the valley below with a sickening shudder. The shudder seemed to bear with it words; it seemed to say, "I am afraid."

The only answer of the elements was a still more furious onslaught, and over she would go almost on her beam ends, staggering under the smashing blow, awash from stem to stern.

Held by fascination he would pick out an approaching wave. Inky black at first, but as it rushed rapidly on its towering strength, looming ever greater and greater, it would assume a dull green hue, picking up something of light, and with an appalling crash it would hurl itself against the little ship.

It seemed such an unfair contest. What impertinence on the part of man to match himself against Nature gone mad on this wild night! How much depended on the shipwright's skill, and how much more on those to whom it really mattered, and in whose custody was the safety of the ship that night.

He saw it coming.

It was 12.30 a.m., and now all the powers of Hell seemed to be adrift, and he braced himself to meet the shock.

With a roar that drowned the babel of the wind, the heaviest sea, up till then, struck the

ship just abaft the starboard bow. The sub-lieutenant lost his hold, but with a frantic effort regained it, perhaps just in time, as the *Dee* heeled over on her beam ends.

Engulfed in a mass of seething water, not spray now, but solid press of sea, cold and drenched to the skin and serious of mind he went below, convinced that his first real deep-sea adventure was like to be his last.

For half an hour he lay on the Snotty's bunk, holding on to the handrail like grim death, and for that same half-hour he confessed to me that he was afraid. I know him to be of average courage, but of keener imagination than most, and he was surely picturing things which were never going to happen.

I understood what he meant when he told me afterwards that he wished that the folks at home knew where he was, and what was happening. I know well the feeling, not that they should share the danger, only that they should know about it. It was so with him, and so, I think, it would have been with me.

By 1 a.m. his frame of mind was detached, the fear of the unknown was no longer on him, he knew the worst, there only remained the knock-out blow. He was no longer more than interested as to when and how it would come, now that he had ceased to entertain any hope of making the base. You see, he didn't know that matters

were not absolutely desperate, though Heaven knows how serious they were.

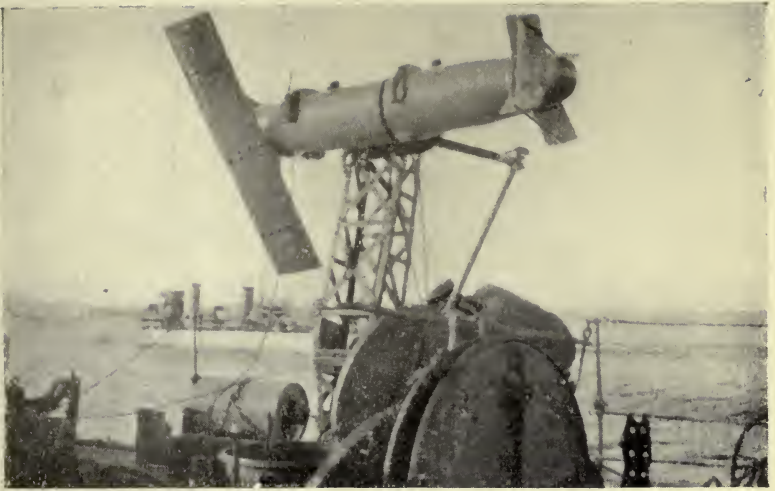
Crash ! What was that ? He listened, tense with expectation. Had it come at last ? Bump, bump, what could it be ? He had not long to wait. Here was a companion now, the Gunner. It appeared that a depth charge had broken adrift, and, uncontrolled, was pounding the deck above the ward-room, until it seemed as if it must burst a way through.

It was but an incident of the night, and lasted but a minute or so, and then overboard it went, but while it did last surely the ship was in as grave peril as at any time during the storm.

The thought even now makes those who knew it turn cold, for even under totally different conditions the lightest consequence was likely to be a serious loss of life.

It is curious, but so it has always been, that the worst that the enemy has to give is as nothing compared with a fearful accident such as this might have been, though the resulting loss in the latter case may be the same or even less. In this instance, however, the explosion of three hundred pounds of T.N.T. would have given the elements the measure of assistance for which they seemed to crave.

It was an anxious moment, and all felt that a stiff fence had been cleared when a terrific sea took charge and dumped it overboard without



PARAVANE.



DESTROYER IN FLOATING DOCK, STERN CARRIED AWAY BY TORPEDO.

THE
END

an effort, weighing, though it did, the best part of half a ton.

The next big thing to happen was the disappearance of the whaler. For the benefit of those who do not know, it may be mentioned that the whaler is the biggest boat carried by a destroyer.

The davits, three inches across the section and of steel, snapped like carrots, and the boat carried away.

Then went the collapsible boats, the same way, swallowed by the cruel sea, ever hungering for more.

For half an hour the ship made practically no progress, and now and again, when broached to, it seemed as if she must be pushed under by sheer weight of water.

During the brief space of an hour the wind had veered the round of the compass, and it was with the greatest difficulty that she could be kept head on to the sea. In fact, *Dee* was in the vortex of a cyclone, hardly less terrible than the Shanghai typhoon of 1905.

The Gunner had gone ; he had his share of the fight to shoulder on deck, for his was the middle watch.

The sub-lieutenant was again alone. No, not alone, for what is that ? A pathetic little shape huddled away in the corner, the very essence of misery. Why puss ! And the poor little thing

had been horribly ill. It was ever so pitiable, but still it had a touch of the ludicrous about it. Sea-sickness! Somehow, in this crisis, there seemed to be no room for such a trivial ill of the flesh, and the sub-lieutenant had had no time to give the matter a thought, but then, there it was.

Poor little puss was evidently not concerned with the larger aspect of the tremendous happenings, she was just ill. Matter had triumphed over mind, and nothing else in the world was of any consequence, as far as she was concerned.

The most pressing problem now was, how to render first aid.

The sub-lieutenant reeled towards her, but he never got there; for she was suddenly galvanized, raised almost from the dead.

A loud crash in the ward-room flat had spoken of a further catastrophe, though, as it was between decks, a minor one. Puss flew for her life, and was no more seen that night.

A case of Stephen's blue-black ink had taken charge, and splintered to fragments, and next moment the dark stream poured into the ward-room, to join forces with the six inches of sea which for hours had been swishing backwards and forwards on the deck, while every five minutes or so, as a fresh cascade of water came tumbling down the hatch, the depth increased, and the mixture became more dilute.

To and fro floated the gear of the sub-lieutenant on—shall we call it—the Black Sea.

It was the first and only amusing touch of the night, and it seemed to mark a turning-point. Let us record the fact, he actually laughed, his mind turned on the camera that had been ruined, and the chances that a claim on the Admiralty for a ruined camera would stand.

From thenceforward he was merely conscious of the physical discomfort, the wet and the cold. It was a good sign. He found himself thinking that these things were beginning to matter; they were a positive nuisance!

The storm had done its worst, and the somewhat steadier engine-beat made it clear that the ship was making headway of a sort.

Progress was gradual, the tempest still shrieked, and still the ward-room furniture joined in the chorus, and the little destroyer was vengefully battered by the heavy seas, but the elements were beaten, and seemed to know that, but for some unforeseen accident, they would have to wait for another day.

Some six hours later the ship, crashing through the heavy seas, made her base, after what, those of the crew who had anything to say, declared was as vile a night as they had ever been out on.

The Gunner was laconic, as usual. "Touch

and go," was all he said, as he lowered his tot of 'Nelson's blood.'¹

Thus did the sub-lieutenant go through his first storm, and you may take it from me that he is quite content to let his experience go at that, at any rate for the present.

He stepped ashore with a feeling of thankfulness, and of gratitude to the ship's company, who had brought her in. He knew it for what it was, real man's work of the best kind.

¹ 'Nelson's Blood'—Rum.

PETERHEAD (*continued*)

You're playing snooker at the Club,
When umteenth time expected 'sub,'
Is signalled by their Lordships.
As down you hasten to the quay,
You dream of adding D.S.C.
To bounty they award ships.

THE welcome extended by the R.A.F. to the naval folk at Peterhead, at their club premises, was as acceptable as it was hearty.

You got a lee from that everlasting wind, and there was the billiard table, which was very popular, at any rate with the *Dee* and P. 33 crowd, and many a game took place between the two where the skill varied inversely as the keenness. It was just what was wanted as a tonic, when one had been four days at sea.

At least on one occasion the game was rudely interrupted by the Gunner, charged with the latest news from the R.A.'s office: "Hostile submarine sighted by H.M. Trawlers — and —, fifteen miles east of Fair Island, homeward bound. *Dee*, P. 33, *Venture*, and *Ida Adams* will proceed to sea, and patrol 'K' line, etc. etc." We all knew the old formula by that time. So,

after bestowing a hearty blessing on the Gunner, off we would have to push, back to the ship, to be buffeted during their Lordship's pleasure, for another three or four days.

The hardest date to pull off was the 'soccer' match between the two ships, which twice got the length of both teams being ready changed, but it has not yet been played, nor ever will be—now. Always the same reason—an appointment with Fritz.

One fine afternoon—yes, it really was fine—found three of us on the first tee of the Peterhead Golf Course. Crash! What was that? *Dee's* recall gun, and off 'Jock' had to go, his golf clubs lying on the first tee, leaving the sub-lieutenant and another to carry on.

The sub-lieutenant made much of the absence of P. 33 at Aberdeen, refitting, congratulated himself, and commiserated with 'Jock' in sympathetic terms, as well chosen as they were beautiful. All that was best in his nature welled forth, he couldn't help it.

On their return, after a closely contested game, full of innocence and golfing reminiscence, they ran into the R.A.

R.A.: "You're P. 33's hydrophone officer, aren't you?"

Sub-lieutenant: "Yes, sir."

R.A.: "Then why the devil aren't you on patrol?"

Sub-lieutenant answers with some confidence, for hitherto it has never fallen to his lot to put R.A. wise :

“ P. 33's at Aberdeen refitting, sir.” There's something wrong at that office of the R.A.'s, he thinks, but still, fancy the old man not . . .

R.A.—breaking in on his meditations : “ Dammit, man! Nothing of the sort! She's on patrol with *Dee*. Report to my secretary at once, and then to me.”

Sub-lieutenant, groaning : “ That comes of having a really sympathetic nature. What did I want to waste all that gush on that blighter, ‘ Jock,’ for? Never again! It's possible to be a touch too human, and now I've absolutely torn it.”

As a matter of fact he hadn't. The secretary put it all right. He had thought that the sub-lieutenant was at Aberdeen, and in consequence had signalled P. 33 to proceed direct from there to patrol, as soon as the necessary work had been done.

Moral : If you're ‘ waiting on ’ submarines, you can't wait on anything else.

On ship almost the only form of lighter recreation was the ward-room gramophone. If you got there first you did your best to dissuade the Gunner from putting on ‘ Alice, where art Thou?’ We had all heard it so often that we were no longer disposed to blame Alice.

One of the most popular records was :

Give me a little cosy corner,
And an arm-chair for two.

The air seemed to lend itself to topical words.
Ours ran as follows :

All such as praise the Nash's fish,
Are frankly forced to own,
It's really nothing near as swish
As the porpoise hydrophone.
When we are up at Peterhead,
On the 'P' boat, and the *Dee*,
Then Fritz he has a lively time,
Wherever he may be.

Chorus

Give us the little baby porpoise,
And a U-boat or two,
Somewhere, as long as we're there,
Anywhere will do.
Give us a river-class destroyer,
And the P 33,
And we'll find a little cosy corner,
In the heart of the A.S.D.

By the way, the Mess Deck had their music.
In fact, theirs was the ship's anthem, sung to a
guitar accompaniment. The refrain ran thus :

'Ow 'appy we shall be, when we leave the bally *Dee*,
And all get to Chatham once again.

The main structure of the song I forget. 'Tis
as well. It was most full-blooded, to borrow an

expression from the smokers 'maduro,' yes, quite 'maduro.'

The Nash's fish was the rival firm, fitted on the Peterhead trawlers, with which *Dee* and P. 33 hunted.

When we were ashore, the Club was often the scene of fierce arguments as to the rival merits of Nash's fish and the porpoise, usually conducted between two sides, each of which had no experience of the gear used by the other.

The little baby porpoise referred to in the above song, was certainly stunted in growth, but, then, almost all the persons who have made history were on the small side, so there is nothing to be ashamed of in that. It may be that its mother died during the critical period of infancy—not the mother's infancy.

Be these matters as they may be—who was it that always used that expression? Thucydides, I think, anyhow, someone pretty far back. No one would use it now—the baby porpoise made good, like the other undersized people; it accounted for a submarine, and further it was on terms of some sort, friendly or otherwise, with the real porpoise tribe.

On the occasion which I have in mind, it seemed to be misbehaving itself. It was some minutes before we found out the reason.

A school of porpoises was following the ship. All round the sea boiled. Out of the water

leaped the porpoises, and with a resounding smack they came to sea again. The assault was evidently directed against their wooden relative, for round him was the focus of disturbance, and every now and again they would strike either the porpoise itself or the cable, and record the fact on the telephones at the other end, to the bewilderment of those who were listening.

He was the only one of our porpoises who never sulked. You can imagine him saying, "As a hydrophone I have no observations to make—yet, as a porpoise, well! as a porpoise, I simply am one, that's all."

Even with him to brighten our lives the proceedings were, on the whole, uneventful, that is to say with the exception of such events as are associated with a continuous spell of the worst weather.

Who really was the Jonah? This was a question that was being seriously asked not only in the ward-room, but on the mess deck.

The sub-lieutenant was certain that it must be he, for the ship had run into nothing but the vilest weather since he had joined.

No. One would have it that it was one of the hydrophone petty officers, whose Christian name he had found to be 'Noah.' It was a bit thick, in modern times, to put to sea with 'Noah'; it was asking for what you were sure to get. It was true, he went on, it had not rained continu-

ously for forty days and forty nights, but it had blown stiff for quite that time.

“I’m sure *Tarlair* won’t mind if we push him overboard. After all, it’s only his life against the ship’s company,” said No. One.

The sub-lieutenant quite agreed, he, too, was certain that, in such a good cause, *Tarlair* wouldn’t mind in the least, so I suppose it must have been consideration for ‘Noah’s’ relatives that saved him from going into the ‘ditch.’

On the mess deck a true bill was found against the white rabbit. The owner put up a most spirited defence, that was not confined to words, but I am sorry to say that sentence of death was not only passed, but executed.

After a more than usually unpleasant night, the ship had dropped her ‘hook’ in the early hours under the lee of the great prison, which overlooked the harbour.

“I reckon them blokes in the stone frigate¹ are better off than us, they do get a dry doss, and don’t ’ave to show a leg till five bells,” said one of the engine-room hands.

His remark was not entirely unreasonable, for everyone was played out, especially the stokers. It is almost impossible to imagine the discomfort in the engine-room of a small ship in heavy weather. The vessel, battered by the

¹ The sailor’s name for any windowed building.

sea, gets her own back from the human freight ; she uses them as she is used herself.

That shriek, that oath, heard perhaps during a momentary lull, what do they mean ? Only that some poor fellow, flung off his balance, has been seared as by a red-hot iron, and will carry the scar for ever !

How those men of the black brigade stick it is a marvel. The matelot, whether between decks or no, will grumble to any extent, will invariably extol the merits of his last ship—it is a curious thing, but it is always ‘ the last ship ’—comment unfavourably on his present, the ship’s company, oh yes, including the officers, in fact principally the officers, the stunt upon which he is engaged, the Admiralty, the ladies of the base, the local amusements, or lack of them, in short everything, but, grumble though he may, he will stick it through, he doesn’t know what it is to throw in his hand.

He will tell you that he believes that this yer packet will go on the beach next time out, but when the next time comes he’s there, grumbling as usual, doing his job as usual, and so it goes on ; he is a pessimist in word and the best of optimists in deed.

To return to the sub-lieutenant’s fortunes. The rabbit was dead—and eaten—Noah had gone—not overboard—and still the sub-lieutenant nursed his sprained wrist, and acquired

as few minor hurts as he knew how, and waited, with what philosophy he could command, for better weather and the appearance of Fritz. Were neither ever coming? It would seem so.

At last things reached the limit. As usual it was blowing, and the ship, then patrolling far northern waters, had set what she hoped was her course for Longhope in the Orkneys, but before getting there had nearly changed her mind, and stopped for ever somewhere else.

One wild Sunday morning, in a heavy gale, the destroyer had all but justified the pessimist's prophecy. Fortunately the 'fret' had lifted just in time, and disclosed, about a cable ahead, the grim headland standing out in relief, amidst the boiling breakers, surely a fitting pedestal for the spectre of Death! It was a sight not easily to be forgotten by those who saw it. What would a moment's hesitation on that morning have meant? One more notice such as this: "The next of kin have in each case been informed."

What a cold heartless statement is contained in those few words. It tells you all that really matters, it tells you, perhaps, that he who was dear to you is dead, leaves it to you to picture how he died. That is war!

What might be spiritual comfort to you, might also console the enemy. The principle is right, oh, of course, it is right—and hard, hard as iron.

Well, no matter in this case, the old packet

drew off in time, of course she did, or you couldn't hear about it, and floundered on her way through the Pentland Firth. Anyone who knows what the Pentland Firth is like can dot the 'i's' and cross the 't's' for himself, but this for those who don't, it's Hell with a capital 'H,' and I must leave it at that. Here the Atlantic and North Sea join forces, and you get a tremendous tide running at eight knots. Throw in a gale of wind, and you want no more.

A brief rest for coaling. Ah, coaling! quite an event, I can assure you. Everyone lends a hand, except the captain of the ship, or so it was aboard the *Dee*. The khaki overalls, and the species of bathing cap that you wore, kept some of the coal dust from some of your exterior, I cannot say more than that. The lady who comes to clean my windows dons much the same kit, including even the bathing cap.

After coaling; stores, and then off again after the elusive Fritz.

Some luck at last! A wireless from one of our own destroyers was picked up to the effect that she was in action with a submarine, with the result that *Dee* set course for the indicated position at twenty knots. After an hour's steaming a destroyer appeared on the horizon, and it soon became evident that she was in action. What a piece of fortune.

It wasn't immediately clear what course the

action was taking, neither could Fritz be seen. She was firing at something, that was plain enough, and at last the truth dawned, she was firing at us !

Poor old *Dee* ! mistaken for a submarine in broad daylight !

The answer made to the challenging signal was :

“ Sorry, we took you for submarine ! ”

The nearest shell dropped some six hundred yards short, so the retort, “ Cannot congratulate you on either gunnery or look-out,” would have been justified. It was the Commander’s idea, but he did not make the signal.

This was but one incident connected with this particular ship, that proved she was suffering from a malignant form of marine rabies. That same night she frightened the life out of one of our trawlers, with the result that all the confidential papers were thrown overboard.

One pitchy night, shortly after the events just narrated, *Dee* was in touch with a submerged submarine by hydrophone. After following her for some minutes it was, through an error of judgment, decided to tune up to eighteen knots, and close. When the ship, after running at this speed for three minutes, had steadied down again to five knots, the ‘ troops ’ were sent to action stations, and hydrophone watch was resumed.

Nothing could be heard. Fritz was suspicious, and had taken one of many chances that the break in 'listening' pursuit afforded.

Twenty minutes of fruitless search ensued, when a 'telefunken' wireless call was picked up of maximum intensity ten, proving that enemy craft were in the immediate vicinity. It still looked as if something might be doing, as the air, for the next hour, was blue with 'telefunken' calls.

The next item was a peremptory call from the base to return at once. It looked as if some portion of the enemy forces was between poor old *Dee* and the 'beach.' Whether this was so or not she got through all right, after a somewhat exciting night.

Minor adventures were not of infrequent occurrence.

On another occasion P. 33 had been advised that one of our ships of the First Battle-Cruiser Squadron would cross her course at a certain hour of the night.

When the time approached a consultation was held over the chart; dividers were applied and calculations made, and from the evidence it appeared that —— was uncomfortably close.

Now the moon was fitfully showing behind light cloud, and under such conditions P. 33 would appear not so unlike a submarine as to warrant —— wasting any time on questions.



IN PETERHEAD HARBOUR.
Coxswain, Chief Engineer, and No. 1.



H.M.S. P33 LYING IN GARDENSTOWN BAY THE DAY BEFORE THE ENCOUNTER.

THE
END

No. She would give us a salvo from her secondary armament, and look around for the mess afterwards. What was the best thing to do? A wireless was sent to —, advising her of our position.

It was but a few minutes later that she was reported on the starboard beam, coming up fast, and but a few more before her searchlight found us. The cold look of enquiry concentrated in that awful gaze made everyone devoutly thankful that the signal had been sent.

Visual communications were exchanged, and the huge battle-cruiser passed on into the night, and we parted—friends!

These little things happened, but they didn't happen often enough, the intervals of monotony in between were too long.

Yes, the sub-lieutenant was getting really fed up, and in his wrath one night he said to No. One :

“There aren't any Boche submarines, they're fairy tales; you can read about them in the papers, like sea serpents, and, as in the case of sea serpents, you can meet people who swear they've seen one.”

No. One is young, fairly free from cynicism, very trustful, of an “if you see it in *John Bull*, it is so” sort of age, so, as might be expected, his answer is :

“Look at the papers.”

" Oh, blow the papers ! Have you seen one ? "

" Yes," he believes he has.

" When ? "

" On the last ship."

The sub-lieutenant knows all about the ' last ship.'

" Don't quote proverbs to me. Let's have the untrimmed yarn."

It appeared that he had rammed something, or rather that last ship had, and it had sunk—I mean the last ship had—and if it wasn't a submarine, what else could it have been ? If it wasn't that it must have been something else. True, No. One, true !

Yes. He was mentioned in dispatches, so it was probably—I wonder what ?

And the name of that ' last ship,' No. One ?

No. One (blushing), " Fairy."

In spite of No. One's yarn, sub-lieutenant begins to wonder whether there may not be such things after all. Stay ! He remembers a discussion with the skipper of one of the trawlers of their division, who had hunted the U-boat for three years, and had never even seen one.

Optimism gives way, and No. One's character is compared with that of Ananias and George Washington, whereupon he becomes a very ordinary plagiarist with the remark, " Wait and see."

Day followed day, and week week. The sub-lieutenant was transferred to P. 33, while 'Jock' passed across to *Dee*. Then at last came 'Der Tag.'

The evening was quiet when the ship left the little bay where she had been sheltering from the S.E. gale, which had at last blown itself out.

Out she pushed for the old 'K' patrol line, where yet again Fritz was expected to show his hand.

The North Sea had taken on a different mood, unfamiliar, almost uncanny.

The ship put her nose through the still sea so quietly that it was difficult to realize that she was making the ten knots which would bring her to her destination by midnight.

After admiring the peaceful scene for a few minutes, and taking the opportunity of snapshotting, from a dry and steady fore-castle, *Dee*, the ship's opposite number, only just two cables ahead, it seemed to the sub-lieutenant that 'a caulk' would be an excellent idea, so he turned in, but I do not fancy that he got much sleep. He told me afterwards that he really thought that something was going to happen at the appointed hour.

And it very nearly did! Fritz was only an hour and a quarter after the scheduled time. What, after all, is an hour and a quarter? No-

thing to worry about, if you have been worrying and waiting for two months.

What would the trawler skipper who had waited for three years have thought about it ?

Unfortunately for him he wasn't on in this Act.

It was at 6.15 to the minute that the sub-lieutenant left that small portion of the ship, which was his department, and joined the officer of the watch on the bridge. The morning was fine, but slightly misty. The first thing to do was to have a look round, and it was by the merest fluke that he happened to pick up the distant silhouette, hardly marking a difference between sky and water. A rapid glance through No. One's glasses, and yes, as he thought, a submarine !

At last a chance had come, and from then onwards, until the end of the piece, action followed on decision, undelayed. No time for perusing elaborate printed instructions.

Engines began to throb, masses of broken water chase across the forecastle as the bow dips deep into the southerly swell. Orders are flying round the ship, guns are laid, ammunition and depth charges made ready.

P. 33 has been saving up for this moment, for—it seems—years, and she knows how to expend what she has.

The Fates have been kind. Fritz has been

caught napping. Weather conditions are almost ideal, and his chances of getting home don't seem worth quoting. Everyone hopes that he will see the matter through on the surface.

A hasty perusal of the German silhouettes shows that the U-boat is of the type ranging between 48-100, of the later series. Well-armed boats these, with a very wide radius of action, something like our 'K' class, only smaller.

Has she seen us? Surely! We are within two miles now. The idea was to use the ram, but already she is lower in the water, she is submerging, and we are—too late!

With a deafening roar the forrard four-inch comes into action. There is enough movement on the ship at twenty-five knots to make a hit very difficult. A half-submerged U-boat is not a large target. Hard luck! The ship had dipped, and the shell falls a little short. No further chance now, she is just going under.

We have closed to a mile, and we starboard helm two points, which should bring us right over her. She was heading norrard when last seen, and under way, so we hope that this manœuvre will enable us to cut her off.

A sharp look-out is kept for a torpedo, though she's probably much too hustled to chance it, and, besides, we are stem on.

We must be there by now. At last the order comes. A shrill whistle from the bridge, and

out shoots the first depth charge, and the Gunner stands by ready with the next.

And that whistle! Who can describe the tingle caused by its blast. Just an ordinary high-pitched note, that's all. But you have been waiting, expecting, that's it, and then at last it comes! You have been imagining what it will sound like when it does come, and what it means; the symbol perhaps of annihilation.

If you are wise, and your duty permits, you take cover as the depth charge leaves the thrower. It contains something like three hundred pounds of high explosive, which has been known to detonate on impact with the water.

Already the helm has been put hard a-starboard to take the ship round in a circle, and before the first explosion has been heard another depth charge goes hurtling through the air, the second of six.

A tremendous concussion shakes the vessel from stem to stern as each successive charge explodes.

How could the 'sub.' live through that, thought the sub-lieutenant, but she had, and it was then, at last, that the turn of the hydrophone party came.

The ship had steadied down as if to recover her breath, and the baby porpoise tells the listeners that the U-boat is still alive, and, furthermore, approximately where she is. The

sub-lieutenant devoutly prays that the porpoise has not let the party down, as he passes the information on to the Captain.

Off dashes P. 33 on a new course—the course—towing this time the paravane, a terrible weapon of destruction, and after barely six minutes there is an appalling explosion.

The ship writhes in her anguish. What can it be, what could it be but——

“Look, man, look, there on the port quarter,” shouts the Captain.

A huge brown blister breaks the surface, and as it appears, so it gradually disappears, quietly, ponderously, down it slowly sinks, not in one burst of imprisoned air, leaping to join again its true element, but simply inert and solid it vanishes from view.

The truth strikes all. The U-boat's hull! At last!

A few moments spent in realization, and then the tension of the last hour breaks. The language becomes hysterical. The mildest shout wildly, hail comrades in terms which, in normal times, might well have led to bloodshed, but now mean less than nothing, the mere overflow after the dam of pent-up feelings has burst.

The climax has passed, but there still remains the weary vigil, the patrol round the Dan Buoy, the investigation of the increasing oil patch.

Sea-gulls and other marine birds have come

from nowhere in their thousands and are making feast right royal on the dead fish lying round the buoy, chattering, screaming, jostling, each trying to oust his neighbour. What a human touch there was about the scene. Each for himself, and the devil take the hindmost.

A wireless signal was sent to the base reporting the great happening, and asking permission to return, which, however, was not granted; and so, wearisome though the patrol might be, particularly in a sea which was rapidly rising, it had to be done, until the small hours of the next morning, when the welcome recall signal came, and P. 33 pushed off for the base, driving through a storm which almost equalled the experience of the 23rd August in those same waters.

It was not until 9 a.m. that anchor dropped, and the weary ship's company could think of a much-needed rest, with the pleasant reflection of something done.

So long had hope been deferred, and so many had been the disappointments, and so vile and unsuitable had been the weather conditions, that it was difficult to realize that the great chance had come and been accepted during the one little period of comparative calm which alone had made the enterprise possible. The past seemed full of promise for the future.

The sub-lieutenant was standing idly on deck, wondering whether it was worth while turning in,

and had just decided that it was not, when he caught sight of the curly head of the engine-room philosopher, appearing from the nether regions. His glance was again directed at the 'stone frigate,' and the sub-lieutenant waited until the words came :

"Sure thing them blokes is a sight better orf than the 'Uns in the tin kettle away out yonder."

NOT MUCH ABOUT ANYTHING

I call to mind when I was young,
How first acquired the 'Latin tongue.'
The text book of those infant years,
Was labelled thus 'there are no tears.'
From whence there flows the fair deduction,
Combine amusement with instruction.
These lines I give as well discerning :
It follows : laughter leads to learning.

NAVAL signal : Rear-Admiral ——— to Commanding Officer H.M.S. ——. "Report at my office forthwith."

No. One's sole but heartless comment was :
"Old man in the soup again."

It was about half an hour later when the said Commanding Officer of H.M.S. ——— reported ashore at the R.A.'s office.

He was very small and somewhat indecisive. The former fact didn't matter. It was a positive advantage on a ship of the type of H.M.S. ———, where space is economized to such an extent that a change into winter underclothing may mean that you are taking up more than your fair share of room.

Restlessly he wandered about the corridor, all of a fever to know the cause of the signal.

Dignity forbade that he should interrogate the R.A.'s staff, the penalty of rank. Poor little man, how he suffered!

He had about half an hour to wait. This is about usual when there is no reason; when there is, you wait much longer, that's all.

At last the fateful moment arrives, and he is ushered into the august presence.

"Well, Jackson, what kind of look-out do you keep? I came aboard this morning, and there was no one on deck to be seen, when I was up the gangway. I am not at all satisfied with the state of affairs on your ship. You will be good enough to investigate the matter and report to me later in the day. That is all I have to say for the present." And the great man indicates that the brief interview is closed.

"Aye, aye, sir." Exit C.O. with a distinct sense of relief that it is no worse.

Later. Captain's cabin H.M.S. ——. Captain sounds bell. Enter messenger. Captain to messenger: "Tell Mr. Kitson I wish to see him."

"Aye, aye, sir." Exit messenger.

After a short interval enters Lieutenant Kitson, otherwise No. One, a fine upstanding young fellow, who manages to get what he wants out of a ship's company not too easy to handle.

Captain: "It seems that I can never leave this ship without something happening. The Admiral tells me that he came aboard this morning, and

there was no one at the gangway. How was it that I was not told of this ? What the devil does it mean ? ”

“ I have heard nothing about it, sir ; I happened to be ashore at the time.”

“ Ashore, were you ! Look into it at once, and report to me.”

“ Aye, aye, sir.” Exit Kitson.

In the wardroom one minute later No. One rings bell. Enter Quartermaster.

“ Quartermaster ! ”

“ Sir.”

“ Tell the Midshipman I want him.”

“ Aye, aye, sir.” Exit Quartermaster.

After a prolonged search the midshipman is found ‘ caulking ’¹ in the chart house, where he is supposed to be correcting charts. The situation is explained to him and he wanders aft, commenting adversely on R.A.’s, Commanding Officers, No. Ones, and all such.

“ Look here, Johnstone, there’s a hell of a strafe ! The R.A. reports no one to pipe him aboard this morning. It really is too d——d thick. What the hell are you here for ? ”

“ Awfully sorry, No. One. I was forrard at the time, and he was aboard before I could get.”

“ I suppose you really mean ‘ caulking ’ in the chart house. I’m not going to tell the skipper that, my lad, so you’d better get a move on and

¹ Naval slang for sleeping.

ask some questions, and when you have an excuse one could listen to and pass on, report to me."

"Aye, aye, No. One." Exit No. One.

Midshipman rings the bell. Enter Quartermaster.

"Quartermaster!"

"Sir."

"Admiral aboard this morning, no one to pipe him up gangway. What the blazes does it mean!!! This ship's company is the worst collection of decayed long-shore refuse that ever was! I thought I could leave something to you. You're just the d——d limit!!"

"Aye, aye, sir."

"Well, what about it?"

"Don't rightly know yet, sir, but you leave it to me, sir, and wait until I see that after look-out."

"Don't you waste any time about it. Report to me later."

"Aye, aye, sir."

Exit Quartermaster with a grim determination to take it out of someone, which leads to the following dialogue on deck:

"Dusty, were you after look-out, six bells?"

"That's my tally. Wot abaht it?"

"What about it? You ugly, lop-eared, swivel-eyed son of a whiff! What's your bloomin' eyes for? Gawdstrewth, if——"

“ ‘Ere, go easy, mate, go easy, wot the ‘ell’s doin’ ? ”

“ Admiral aboard this morning, no one at the ladder. That’s what’s doin’ ! Ain’t it enuff either ? The Admiral, Old Man, Lootenant, and Midshipman—that’s the ole blarsted crowd—carryin’ on simply orful.”

“ Now I gets you. It’s orl along o’ that blarsted dawg. You wait till I ‘itch up alongside ‘im, I’ll learn ‘im ! ”

“ That blarsted dawg ! Wotcher mean ? ”

“ It orl come along like thish yer. That blarsted brownie was scrappin’ like ‘ell with the ward-room cat, and I was standing around, just interested like ; then orl of a sudden, when I come to look round, the bloke’s aboard, and that’s ‘ow it orl ‘appened, strewth it is. I didn’t arf come over kind a goosey-like when I seed ‘im.”

“ Well my son, you’re in the Service, no matter wot your tally is in civvies, you ain’t no bloomin’ dog fancier on this ship. That’s wot I’ve got to tell the midshipman, and a bloomin’ thin yarn, too.”

Goes off grumbling.

‘ Dusty,’ otherwise Miller, sights ‘ Brownie ’ the ship’s dog, which had deserted a mine-sweeper at Aberdeen for destroyer life.

“ You come ‘ere, ‘ Brownie,’ my son. I ain’t ‘arf a mind to slip it acrost yer, that I ain’t, getting

me ticked orf same as you did. Oh, I knows you ain't got any too much time for Admirals, skippers, first lootendants, midshipmen, and such-like, no more ain't I, old son, so put it there, but you be careful there ain't no more scrappin' next time, or it'll be a wooden shirt¹ you'll be needin' after I've done with yer."

The foregoing is merely meant to illustrate the human practice of trying to shift the burden of responsibility. Wasn't it Jonathan Swift who said :

Big fleas have little fleas,
Upon their backs to bite 'em ;
And little fleas have lesser fleas,
So on 'ad infinitum.'

Everyone was ashore from the wardroom except the two. They had arranged to play golf, but the fog had shut down too thick on the Forth to make it worth while chancing the trip to the Braid Hills.

"You can't make a silk purse out of a sow's ear." The profoundness of this observation pleased No. One so intensely—not the same No. One that we have so lately mentioned—that he repeated it a second time, and waited for the challenge to be taken up.

Now No. One was an R.N. lieutenant, and his audience of one a sub-lieutenant R.N.V.R., so it may be surmised what the subject in debate was.

¹ Nautical term for coffin.

He didn't really mean to hurt. No. I will give him that. He was a typical young R.N. lieutenant, quite efficient, but the last person on earth who would try to imagine what was on the other side of the wall, or who would have the curiosity to look for himself, with not too fine an edge on his own feelings, or, therefore, too fine a regard for those of others, but still a type to be found on dozens of our destroyers, good fellows almost to a man.

No. One followed it up with, "Well, what about it?" Half nervously spoken these last words. In fact, he was afraid that he had hurt, and he was a nice boy.

"No one but a lunatic would attempt it," answered the other, "silk is silk, and a sow's ear is—well, the auditory appendage of a female pig, different material. Come down off it and talk sense!"

"Precisely what I mean, old bird, you can't do it."

The sub-lieutenant assumed as innocent expression as he knew how. "I don't follow you any further," he said.

No. One still wore that expression of anxiety, but for the opposite reason. At first he had been afraid that his opponent had appreciated his point, and now that he had not.

"Why not?" he said.

"Why not? Well, as I understand your



U.S.S. *TEXAS* LYING IN THE FORTH.



HYDROPHONE SHOP ?

simile you blokes are the silk and we're the other stuff."

No. One grinned with joy. "Yes, but I don't expect you to agree."

"That's just where you're wrong, I do agree, every time. I don't happen to carry a purse for well—for obvious reasons, but if ever I do you can bet your bottom dollar to a ham sandwich that it'll be made of pigskin."

These little R.N. and R.N.V.R. discussions were invariably conducted with good humour on both sides, and were very popular, particularly when the sides were anything like numerically equal.

R.N. did not expect too much from us as seamen, but were always tolerant of our shortcomings, except the attempt of some of us to get extra shore leave, on the ground that hydrophone operations were in suspense. Furthermore, they invariably went out of their way to help us in a kindly und unostentatious manner.

While we marvelled at their dexterity and quickness—they handled our cable more skilfully than did we ourselves—we were secretly rather amused at that suspicion of splendid isolation that was theirs, neither side nor priggishness. The fact is I do not know what it was. You see it in the medical profession, who invariably treat their adult patient with a weary, if good-humoured tolerance, as does the young

Public School boy a still younger brother. That's given it to me! As a kid!

This quality was not noticeable in the U.S. Navy, at least I never saw it in my limited acquaintance. They did not know the significance of the R.N.V.R. rings, and perhaps credited us with what we did not possess.

On the topic of the U.S.N. one or two amusing little anecdotes are told of them, as one might naturally expect.

On the arrival of the U.S. contingent on the Forth, afterwards to be known as the Sixth Battle Squadron, it is on record that the signal was sent to *New York* (flagship of the squadron): "Carry on beyond Forth Bridge, and drop anchor."

On gaily steamed the squadron, nor paused even when opposite Rosyth. It was abundantly clear that something was wrong, and the flagship, as she was bearing down on our ships at twelve knots, received the signal: "Where the blazes are you going?" To which the answer: "Instructed to carry on beyond fourth bridge, have only passed one."

I cannot vouch for the truth of this story, but it rests on at least as sure a basis as such stories usually do.

Not so the next, though it was told me as true. How is it that a yarn always is told one as true? Either it happened to the narrator, or else to

some relative or friend of his, who vouched for its veracity. Why not let it rest on its own merits as a yarn, be it truth or fiction? Well, no matter.

Some of our men were on a courtesy visit to the *New York*. You probably know that total prohibition was the order of the day on board, throughout the U.S. fleet, with the result—so it is calumniously whispered—that most of the officers used to run a kind of cocktail bar in their cabins.

Imagine our party welcomed by the Flag-Lieutenant, who says some such words as these: "Say, boys, I guess you know this is a dry ship, it's a most unfortunate circumstance, but I'll hustle right away, and see what can be done."

Result—cocktails, which are duly appreciated.

The same routine is observed by both Flag-Commander, and Flag-Captain, and then our party is ushered into the presence of the Admiral, who repeats much the same formula, and presses a bell.

A trap-door flies open and serves as a frame for a grinning, dusky countenance—you know the tint I mean. Another two dips and it would have been a fast colour—surmounted by a fringe of woolly hair, Uncle Sambo, probably a family retainer of the Admiral's in the piping times of peace.

From the apparition in the frame: "Say, Boss, did you buzz?"

A third and last.

You probably know the tune of John Brown's Baby. The revised Yankee version ran as follows:

We'll pay homage to the Kaiser,
We'll pay homage to the Kaiser,
We'll pay homage to the Kaiser,
Yes we will (two syncopated beats) like Hell!

The success of the stave depends on the singers timing the pause correctly, and crashing in together on the last words, "like Hell," well . . . like Hell!

If correctly sung in part, it is quite effective and amusing.

Such of our duties as consisted of shore work — and be it remembered that our show was principally a shore billet, though, had the war continued it might well have been otherwise, were, from the nature of the case, not particularly perilous. Ours was what the sea folk termed 'a quiet number.' Notwithstanding this fact, there can be no two questions about the services it rendered in keeping the submarine in check. The conception, or rather the misconception as to the facts by the public provides at least one good story.

One of our P.O.'s was returning to the ship to

take up a commission, none other than the genial 'Jimmy J.'

Picture him in a crowded third-class carriage on the 10.30 p.m. from King's Cross, and I may say, in passing, that if anyone else is in the carriage you might talk about a crowd at once, for Jimmy J. takes up a lot of room.

On this occasion it was very crowded; it contained a few civilians, one of them talkative, some Tommies just back from the other side, the mud of the trenches still on them, and our 'Jimmy J.'

The talkative one soon got busy—they always do—and became so laudatory that the embarrassed Tommies diverted attention to 'James.' "This is the boy for me," exclaimed one. The focus of attention now shifts to 'James.'

Talkative one: "What's your line, my lad?"

'Jimmy J.,' modestly, "Anti-submarine."

Sensation! Tremendous wave of enthusiasm, plaudits, handshakes, and backslappings from everyone.

'Jimmy J.,' still more modestly:

"Well, someone's got to do it."

The foregoing story illustrates the necessity of taking the nation still further into our confidence, so let's make a start right now.

Although ours might be termed a quiet number there was, of course, technical knowledge to be acquired.

It was a curious sensation this going back to school, digging out a little mathematics from the past, and acquiring a superficial knowledge of elementary electricity, that never even had a past, working out cunning little problems, examples of $C = E$ over R . It was all quite novel to us, except a few.

“A microphone is a means whereby mechanical motion is translated into a variable electrical resistance.”

Oh dear no ! I never said that, I only wrote it. I'm not nearly learned enough to have invented such a splendid saying. All the same it pleases me and fascinates me intensely. It's hardly too much to say that it holds me spellbound, or rather it used to, until I got on familiar terms with it, never that vulgar variety of familiarity that breeds contempt, I do assure you.

I used to dream that I said it myself. Ah ! Those were proud nights indeed. It always seemed to me to be the sort of sentence that should be declaimed from a public platform. Winston Churchill never got near it. It should in course of time pass into a proverb.

As a trite saying it has only one serious rival. “The Law of Causation acts through the world of the permanent possibilities of sensation.” I know who wrote this, but I am not ashamed to confess that I have not the slightest idea what it means. I think that the key has been lost. I've

only met one man who claimed that he did know what it meant.

“Remarkable man,” you will say. Very remarkable. A hobby of his was to write to the Chancellor of the Exchequer regularly every week enclosing a cheque for the exact balance of the National Debt up to date.

Its interpretation, even if it really has one, doesn’t matter to me in the least. Isn’t it a topping mouthful?

In passing I should like to mention that the use of this expression as a method of clinching an argument is protected by copyright. There is no existing answer to it, when put in the form of an interrogation, thus: “Does the Law of Causation,” etc. Hence it is obvious that the argument, very likely an unpleasant one, ceases on the spot. Just think of it!

Many a marriage would have turned out differently, if only he or she had known of this homely phrase.

Where were we? You were going to be put wise as to what our work really consisted of. How far had we got? I remember.

Anyway. What is a microphone?

I examined one once, unscrewed the cap, and looked inside.

What a dandy little box for collar studs, if only it were a little larger. But why the coal dust inside? Only one fact killed the theory

that it was the property of someone hoarding coal, a coal hog, and that was that I examined others, which, like the first, were only half full. What did this prodigal waste of room mean? I gave it up.

At last, the combination of unparalleled patience on the part of my instructor, and may I say immense concentration on my own, forced upon me the astounding truth.

The microphone isn't a collar-stud box, it isn't even a miniature coal dump, it's neither of these things. It's, it's—well, I'll tell you all about it.

You tie two wires to it and heave it into the sea. Broadly speaking, that's almost all you have to do.

By the way, observe first of all that the two wires have a wrapping round them to keep the cold out. The wires have loose ends, like most other things. These you take ashore and fasten to an electric battery, which you have previously drawn out of 'Store.' If you are a *bona fide* experimenter, there is hardly anything on earth that you cannot draw out of store.

You then hitch on a pair of Brown telephone receivers, the things the girl uses, who reads Charles Garvice when she ought to be attending to you. Stay! I'm wrong! She wouldn't use as swish a variety as the product of Mr. Brown, though she might with justice claim to be an experimenter of the highest type.

Well, then, having got thus far, you clap the telephone receivers on the head of the listener, after having taken his measurement—the measurement of his head, I mean—you put him in a chair, and he falls asleep.

A submarine will probably not pass anywhere near the microphone, but it may ; the listener will probably not waken, but he may ; the S.N.O. will probably not take any notice of your report, but he may ; if all these things happen, the submarine will probably not be destroyed, but it may ; and lastly, if you are chiefly responsible for the destruction of the submarine, the Admiralty will probably not reward you, but they may !

By the way, the microphone is almost as somnolent as the listener. It is necessary to call it every morning before expecting it to get busy on the day's work. The process is known as 'tapping.'

There are, of course, plenty of other details which I find myself unable to disclose, and you can attribute what meaning you please to the word 'unable,' I don't care in the least, I am above that kind of thing.

One serious omission I find, though, and that is that after all the trouble I have taken to tell you these things, I have not accomplished what I set out to do, for I have never told you what a 'microphone' really is.

Never mind. I have given you the theory in a nutshell, and if it isn't enough, it's the size of the nut that's at fault, not I. After all you have the same measure of consolation that kept me going during the darkest days of the war, if you but remember that "a microphone is a means whereby mechanical motion is translated into a variable electrical resistance."

What more do you want? I should have thought that you might well have been content with much less.

We were supposed to go through our course in six weeks, or thereabouts. Well, what is there to smile at? The politician who makes the wars we have to win doesn't have to qualify at all. If he makes a mistake he gets promoted, whereas if we do, well—we don't.

Naturally I do not suggest for a moment that you could hope to acquire the knowledge that I have imparted to you in six weeks. It is the concentrated meat juice of a year's patient, and may I say, intelligent study, but you could at least make a fair start.

When commencing our studies, it was necessary to battle against discouragement. The biggest crumb of comfort for us all—it was almost the size of a quartern loaf—was the reflection that even the leading authorities know nothing whatever about the subject. For instance, the first question asked by that fatuous

type of textbook that goes in for question and answer is :

“ What is electricity ? ” Answer : “ We do not know.”

It isn't a very strong kick off, is it ?

I don't know in the least why I am telling you all this. Boundless enthusiasm for the subject carries me whithersoever it listeth, I suppose. I ought perhaps to have told you before. The fact is that it's all obsolete.

There has been an astounding development lately on entirely different lines.

The idea is roughly as follows :

A submarine—hostile mind you, at least we hope so—approaches the new contraption, which then whistles a certain note, the note to which the engines of that particular submarine are bound to respond. By this means the submarine is lured on to a carefully prepared mine field and blown up. A sort of scientific application of “ Dilly, Dilly duckling, come and be killed.” After all there is nothing really new in this world.

I can definitely state that this contrivance has not yet failed, as a matter of fact I do not fancy that it has yet been tried. The principle involved is that of ‘ resonance.’ I only tell you this because I am certain that that is what my instructor would have said.

I have tried throughout this chapter to ap-

proach my subject in the true scientific spirit, on the lines that science always is, and always will be, its own reward.

That being so I unreservedly place anything that I have said, and further, all that I have left unsaid, at the disposal of you, dear reader.

I wish that I could liven you up with something a little less—well—heavy. I am sorry, it is impossible.

My present mood is one of pure scientific detachment, I get like that sometimes. I am absolutely in tune or *en rapport* with the higher flights of learning for the moment. The principle involved is that of ‘sympathetic vibration.’

With that observation I will bring to a close a chapter that is already too long.

SEABANK

And all that therein was.

IF yours was a shore billet there must be the place where you eat, live, and have your being. I am not suggesting that even if you are afloat you do not eat, live, and have a being of sorts. Well, there were such places, ranging from the hotel, through the furnished house, to the ordinary 'digs.'

The attitude of the furnished-house proprietor gave rise to a condition of things calling for redress. Having battered on the naval occupant for the long, lean winter months, there was a marked disposition to freeze him out when the local season arrived. This end was accomplished either by the simple expedient of giving him notice in the ordinary way, or else raising his rent to such an extortionate level that he probably went, staying on only—if he could.

The crowd in the local 'digs' during the season, i.e. the Glasgow and Edinburgh holidays, was such as to make life therein an almost insupportable burden. For instance, at one historic billet in the Shore Road, the writer heard a potential lodger turned away with the informa-

tion that the drawing-room sofa was booked until August 19th.

At the same place it was seriously suggested by a typist (hailing, I think, from Glasgow) that if the landlady would accommodate the young lady's father, mother, and grown-up brother, as well as herself, they would be prepared to occupy the same room. I am glad to put it on record that the typist and company went elsewhere.

Reader, have you ever been caught up, engulfed as it were, in the maelstrom of a Glasgow or Edinburgh holiday ?

I hope that you have. This, at first blush, may appear to be a singularly unchristian wish.

What I really mean is that I hope to number amongst my readers many who, to my certain knowledge, have thus suffered.

If you have, you've had some, and probably know what precautionary measures to take. If, on the other hand, you have not, and you prove to my satisfaction that you are the kind of person who would take hurt therefrom, I will, in confidence, make you wise as to when these orgies take place.

They are like an English August Bank Holiday, only infinitely more so.

Our experience, mark you, was confined to a period of war, and was, of course, influenced by the restrictions on travel and holiday making in general, incident thereto.

What these holidays must be like in peace time ! Well, I am no Pett Ridge, I have not seen them under those conditions, and I lack the imagination, fortunately, to tell you.

The institution of an Officers' Mess was probably a measure of relief against congestion and local piracy.

Residence at 'Seabank'—so this Officers' Mess was styled—though it led to unity of control, and inasmuch as it led to unity of control, somewhat circumscribed one's sphere of action, and rendered one liable to a host of mess rules, many of which were entirely necessary, probably all in the case of those who would have still been at school, had it not been for the war.

For instance, the midshipman had to be in time for breakfast, alternatively he had none. I do not really know, but I venture with some confidence to suggest that, before he entered Seabank, he had never been in time for any meal in his life.

Please understand me at once. I do not mean to imply that he suffered from the type of unpunctuality bred of laziness, far from it. The fact is, he was always in a hurry. He was out to squeeze all from life that it might yield, whether in work or relaxation.

Again. One essential of his existence was that he should be waited on hand and foot. He never knew where any of his belongings were. To him

such knowledge was a menial act. Things had to be found for him, and in the finding it was expected that the entire household should participate with the exception of himself.

While in 'digs' no period could be set to his coming and going. He usually required a meal on arrival, immediately on arrival. Should the hour be late, and he find himself locked out, the simplest method of entry would be to arouse an accomplice within—and the rest of the street—from his well-earned slumber. On occasion it might be that there was no accomplice suited to the purpose, or that he resolutely refused to be—I had almost said—wakened. In such a case an entry via gutter pipe and first or second floor window would be made, which lacked no element of excitement save only felonious intent.

I do not believe that he ever came under fire on these occasions, anyhow he never confessed to it. Perhaps the sufferers felt about it rather as I think that I should, in fact as I did on one occasion, when I searched for a midnight marauder, and returned devout thanks that I did not find him.

One of these nocturnal enterprises is worthy of record. John was on leave down in Hampshire, and was returning late at night to the locality where he looked for a night's rest. I say 'locality' for he was apparently uncertain as to the exact position of his lodging.

The beautiful stillness of that summer night was dispelled by a succession of pealing of bells and spasmodic outbreaks of machine-gun fire.

What could this curious combination portend ? The whole neighbourhood was roused. Was it a night attack ?

The ordered military tramp that could be heard coming nearer, during a momentary lull, lent colour to this theory.

What, then, of John ! What of this young lad caught up in the excitement of these midnight happenings, literally 'bushed' in the midst of that Hampshire village. I say nothing but the truth when I tell you that he alone of the actors of that drama kept his head during its unfolding.

Perhaps I had better explain more fully. The machine-gun fire turned out to be nothing more serious than a vigorous bombardment of every house door that possessed a door knocker, and the pealing of bells, well it was simply a pealing of bells, not striking a note of triumph, not telling of the discomfiture of a defeated and retreating foe, as in Tchaikowsky's 1812 Overture, but rather one of outrageous enquiry, not religious, but rather secular, yes, distinctly secular.

The tramp of the soldiery was simply an armed picket that had been turned out to investigate the matter.

Presently the picket reaches our John.

Corporal: "Excuse me, sir, you ain't seen a chap of ours, 'ave you, bit on, he must be, 'opped it out of barracks, and been ringin' up the 'ole neighbourhood, and we're out to pinch 'im."

John, all innocence and interested unconcern, tells the Corporal that he has not seen anyone, and with that unsuspecting warrior's help, takes a fresh observation, corrects his bearings, and thenceforth—perfect peace.

It was he who lit the candle, so it was up to him to blow it out.

When petrol became impossible to obtain it was hoped that John's motor-bike, which had long been the terror of the Fife roads, would be scrapped.

If this might be so, anyone in the county possessed of a car, became quite reconciled to his own personal inconvenience, it was worth it.

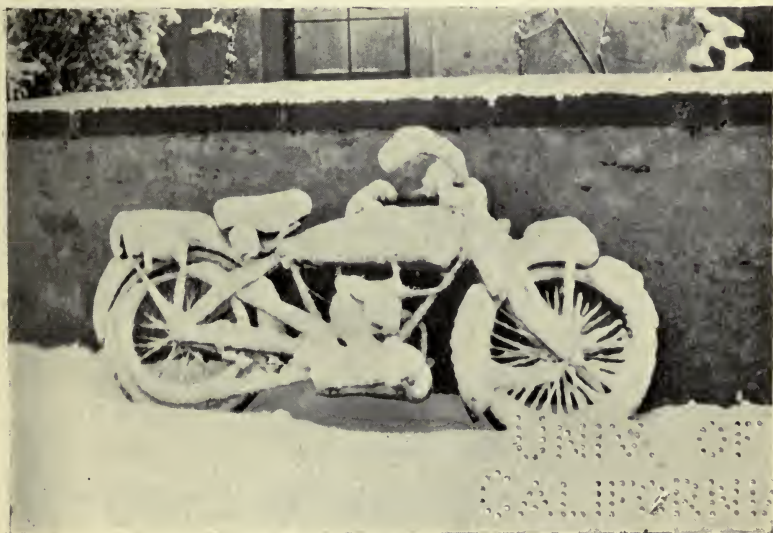
For a while it did seem as if the war had sent this great blessing to mankind. Dash it! the war seemed almost worth it. 'Seemed,' did I say! It WAS worth it.

One day—I had almost given you the date, but you may easily get it from the parish (or perhaps the police) records—the countryside was startled out of its false sense of security by the apparition of the Calthorpe, which had taken the road again.

One method of dealing with the submarine



"JOHN."



HIS MOTOR BIKE OUT EVEN LATER THAN HE WAS.

THE
END

menace has always been to cut off the supply of fuel, when it could be located.

It had been hoped that an analogy had been found in the case of the Calthorpe. Alas ! vain hope, it was not to be. The genius of the man, or rather, the youth, had surmounted the obstacle. What, then, was the motive power ? A sponge bag filled with gas, tapped from the dining-room jet in his ' digs.'

In the summer, if not engaged on youthful pursuit, you would surely find him on the golf course. He was a keen, if embryonic, golfer.

No one in those days of conserved labour would dream of employing a caddy save he. Here again the statement but proves my point. When his ball had been played, he never had the remotest notion where it had come to rest. The reason was not so much that his vision was not of the best, but that here you had a menial duty, which could and should devolve on whomsoever had been told off to wait upon his bidding.

The youthful carrier was not always a success, as witness the following :

John : " Look here, caddy, you really must mark the ball. What do you suppose I pay you for ? "

Here follows a prolonged but fruitless search, during which John reaches one end of the patrol line, and the diminutive urchin the other.

John : " Hi, caddy ! Hi, caddy ! " Now

John possesses what is going to be a rich and penetrating baritone. I don't mean that he ought ever to be allowed to sing. Everyone on the course is completely put off his or her stroke, and asks a generous opponent permission to play it over again.

"HI, CADDY!!! are you shortsighted?" Complete bemusement of infant Scot who has not the foggiest notion what John is talking about. "Because if you are, it would pay me to send you to an oculist and have you fitted out with glasses." A dominating youth!

On one of his periodic stunts to London—he covered the British Isles on really quite important enterprises—he evidently made a big impression at the A.S.D.

In the anti-submarine endeavour Britain and her great ally over the water were naturally inter-dependent.

Well, there had been some palaver with regard to certain anti-submarine gear, either to be supplied by us to U.S.A. or vice versa, I do not know which. The point is that there was some hitch, and it became necessary that a heavy-weight representative should cross the ocean as Britain's spokesman.

You find John duly appointed by the A.S.D., on the eve of departure, in a fever to get away before *Tarlair* really appreciates the position.

A pest on it! A courtesy signal is sent by the

A.S.D. to *Tarlair* advising them that it is proposed to send the midshipman to America, and perforce John must await the answer, which came with a haste that was positively indecent.

“Tympanum¹ to A.S.D. Midshipman —— to return *Tarlair* immediately.”

The tragedy of it all !

“You know I have a dominating personality,” he once said to me.

If to be firmly convinced in one’s own mind as to the fact, constitutes in itself possession—and surely it goes more than half-way—he had !

You now know that he was a distinct entity to fit into the scheme of things at the Officers’ Mess at Seabank, and you also know the reason why. No need to pursue the matter further than to say that he was responsible for an entire code of laws of almost Draconian stringency, which were laid down by the Captain for the governance of Seabank.

Well, well ! He took a large size in hats, and for a sufficient reason, and he never missed writing home of a Sunday, wherein lies no mean physical and moral testimony.

Seabank was a happy haven, save perhaps for those whose wives were in residence in Aberdour, and who had, for that reason, to maintain a dual establishment.

Never was a mess better run, nowhere was the

¹ Tympanum. H.M.S. *Tarlair*’s telegraphic address.

food more varied and ample ; and one of the features most compelling of admiration was the tactful way in which ' Kelly ' held the balance between the Wren Officer, who ran the Commissariat, and such of the members as were too young to appreciate the feminine equation.

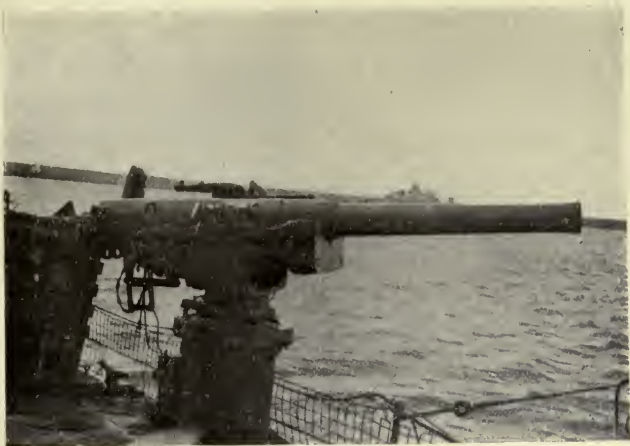
We were seldom dull. Exceedingly varied was the entertainment provided.

' Jock ' had every musical instrument known to history, with the possible exception of the sackbut, the psaltry, and the dulcimer, though in fact these may have been the titles of some of the rarer instruments which he produced when under the influence of extreme emotional stress.

And on all of them he, at one time or another, would perform.

We liked him best, I think, on the bagpipes, and least on a ghastly hybrid affair with a trumpet and one string, emitting a wail suggesting the passing of a lost soul, but even on this we preferred him to Halford, who sometimes got hold of it.

It was usually when one was attempting to balance the wine books that ' Jock ' would give you an ' obligato ' on the bagpipes. By the way, I have no notion what an ' obligato ' means. The word would seem to convey a sense of duty or compulsion, so possibly ' Jock ' was not entirely a free agent in the matter, in which case he was more to be pitied than censured.



TWELVE-POUNDER ON DEE.



"MARGATE."



"JOCK."

TO THE
LIBRARY OF THE
MUSEUM OF NATURAL HISTORY

Anyhow, if I do not know what 'obligato' means, I do know what trying to balance the wine book means when—to borrow a military metaphor—'the situation' is changing from hour to hour.

But feel in the mood, and you might match your strength against either 'Jimmy J——' or Gould, and do really very little damage to the furniture, considering what such an undertaking meant. In any case an intelligent person coming in afterwards, and unacquainted with the cause, could have told at a glance, that if there had been an air raid, it had not been a particularly severe one.

If, on the other hand, 'Jimmy J——' could find no one ready to try a fall with him, he would give the furniture the exercise that he thought it required in a solo performance.

As fine a form of delectation as any was an argument on social conditions between 'the Doc' and the 'Professor.' You let the fire out and opened all the windows, and even then had to sit in your shirt sleeves.

An all too infrequent visitor, whom we welcomed, was 'the Padre,' one of the best, and wittily anecdotal.

He was equally good company whether on the golf course or in the pulpit, and was much missed by his many friends when he went south.

Included in his flock besides *Tarlair* were the Fleet Colliers that lay off Burntisland.

One story which he used to tell against himself, which I feel bound to repeat, ran as follows :

When at school he assured us that he invariably occupied the lowest or next to the lowest place in one of the lower forms, in company with his friend, who was named Bliss. His statement seems hardly credible, but I must accept it, or spoil the story.

Now it was the habit of the headmaster to make a weekly review of each form. History relates that on the occasion in question, observing, as usual, the two last names on the list to be Bliss and Bramwell, he remarked :

“Humph ! If ignorance is Bliss, what is Bramwell ? ”

All lights had to be out on the lower deck by 11 p.m.

This was not only a wise, but also a human law, as one would naturally expect from the Captain.

Its humanity lay in the fact that, if you really sat up until then, you were in the last stages of asphyxiation, produced by the terrific heat of the incandescent gas, for of course all the windows had to be barred and shuttered in compliance with the lighting regulations.

Perhaps the most useful purpose that Seabank served was as a clearing house for officers on demobilization.

From beginning to end of this period the house

was full. It was then that you heard the gossip from the hydrophone stations, as two by two the pairs returned to *Tarlair*.

For instance, a ray of sunshine was reintroduced into your life by the news that the Inchkeith goat was as partial to a diet of cigarette ends as he had been during the brief and breezy fortnight which you spent on the island.

From Fidra came a most distressing tale confirming your worst fears of the lamentable health of the local rabbits. You vaguely wondered whether it was worth anyone's while to demand a Royal Commission to look into the matter, and decided that it was not—except the Commission's.

From Elie all the latest news about 'the porpoise,' from what might be termed, if not its breeding, at any rate its training ground. Busy though they were on 'the porpoise,' it appeared that the lighter side of life claimed the attention that was its due. Stirring accounts of meets of the local hunt, and other social functions which had always found the hydrophone service well represented.

From Margate, well, from Margate nothing heavier than you might expect from such a source.

From far Greenore and the Isle of Wight alike masterly technical detail which bore a family resemblance, and from Aberdeen, and the Yorkshire coast, how wise it had been of Fritz to throw

in his hand before these stations had properly got into working routine.

It was all most interesting, particularly to one who was meeting most of these men for the first time, for many of them had spent two years or more at their respective stations.

Did we learn anything about the hydrophone which we did not already know? Well, would that have been possible, and, think of it, reader, if you have been attending, you know as much about it as did we—nearly.

So much, then, for Seabank. The subject—had one been in the mood—might very well have been treated as contentious, but I have preferred to deal with it as contented. So much better, don't you think? And, besides, it's all over now.

The P.O.'s were billeted either at the Forth View Hotel, under the Master-at-Arms, or at Tarlair Barracks, under C.P.O. Wright. I know which of the two billets I would have chosen, but I am not going to tell you, why should I?

There were several who, as in the case of officers, had their wives in residence and occupied furnished houses.

Now then, if you have read this chapter, do you know how we spent our hours of leisure? Can you picture each moment from 5 p.m. until 9 a.m. of the following day. The aspirations, the joys, or disappointments that might, that

did, in fact, find their way into our periods of unemployment ? No, of course you cannot. No matter. Are you any worse off than in that little question touching the microphone ? I say No, with emphasis. Where, then, is your grievance ?

CONCLUSION

Science rests on reason and experiment, and can meet an opponent with calmness ; a creed is always sensitive.

FROUDE.

IN the foregoing chapters have been indicated in a general way the methods that were adopted by the hydrophone branch of the Service to combat the activities of the submarine.

How far were they successful? That is a question which I do not believe that anyone could have answered with any degree of definition.

Our duties, so far at any rate as they concerned shore stations, merely consisted in locating the submarine, without any actual guarantee, seeing that its detection depended on sound, that it was of hostile origin, and then passing on the information with all possible despatch to the nearest Extended Defence Officer, who took such steps as he might think advisable. With what those steps were, you had no more concern than had the local Food Controller. It seems a pity, but it was so.

A rumour usually filtered through that the submarine had been destroyed, or perhaps that

it had not been destroyed, or again that it was not even admitted that a submarine had been heard at all.

Such rumour, whatever its source, and however convincing in all its surrounding of circumstantial detail, never rested on official foundation. Nothing did you hear from your senior, unless you had made a mess of things, unless yours had been a sin of omission.

Were the submarine to run amok in the neighbourhood, unreported by you, then of course you would receive official intimation of the fact, rest assured of that. Unfortunately it was the only happening which you could contemplate with any certainty.

In the circumstances, then, would it be too much to assume that on the many occasions on which you submitted a report to an unresponsive E.D.O., you had rendered a signal service? Perhaps, perhaps not! In any case you could hardly be blamed for making the assumption.

The 'Q' boats, patrol boats, submarine chasers and so on, worked under more favourable conditions than ours, they had a concrete view of their undertakings, and of the fruits (if any) thereof, they attacked what they saw, not what they heard; they bagged all the credit, and most of the submarines.

The testimony of the hydrophone rested on

two bases, the accuracy of the instrument, and the ear. Either might be at fault, or both.

Take the instance of a torpedo.

As heard on the hydrophone it resembles nothing more than the chant of a hen over a new laid egg, thus :

Cluck, cluck, cluck, cluck, cluck, cluck, and so on to the nth degree. What 'n' stands for obviously depends on several factors, e.g. the distance from which the torpedo is fired, and the time when you first hear it, and whether the torpedo is as well laid as the egg. If it is don't worry about the clucking, you will find that it doesn't really matter, and that it will stop quite suddenly—to hatch.

The hen, by nature a pessimist, or at best an emotionalist, has to brood over so important a prospect ; you, on the other hand, need not, for you will not have the time.

If, however, the torpedo is ill laid, you must imagine it to resemble nothing more than the same hen triumphant, performing a sort of Turkish Patrol. The 'cluck, cluck' will be a sort of crescendo—diminuendo affair, obviously indicating a miss.

Observe how careful I am. I said that the run of the torpedo will resemble 'nothing more' than the 'cluck' of a hen. It seems to me that this statement does not commit me very deeply. Just so ! I have no wish that it should.

My motive in telling you all this might appear to be to get poultry fanciers interested in what I have to say. This is not so, but if I achieve that result, so be it.

No. I have borrowed this—may I say—pleasing little illustration from our British rural life, because a hydrophone cable can and does at times reproduce a similar note.

How then are you to be certain on this point, how distinguish between the vibrant cable and the torpedo? Speaking from the ignorance born of egoism I am not at all sure that the distinction can always be made.

Just think of it! You have been listening for hours, shall I say days, yes, I will, for it is very nearly true, truer perhaps than some things that I have told you. Your head aches, and you feel almost too tired to be sleepy, almost too . . . Great Scott! What's that?

Cluck, cluck, cluck, cluck, repeated endlessly, and rhythmically, and becoming louder, at least so you think.

This may be the crisis of your career, the point at which it is going to pay to make a swift and correct decision.

Rapidly your mind turns on the various farm-yards you have visited during your life. Was it not Mr. Sherlock Holmes who said, "Take every theory, however improbable, and weigh it carefully, before dismissing it from your mind." You

are a great admirer of lucky people, so you take the improbable theories first.

You used to keep fowls yourself once. You remember that old speckled Sussex that had something the matter with her larynx, and clucked so unmusically.

You have to weigh up and compare, and in turn reject the 'cluck' of practically every hen you have ever heard, when certain definite reasons for negating the theory that it is a fowl at all commence to impinge upon your brain.

You happen to be on a destroyer at the time. You know that you have never seen an egg on a destroyer, never even heard of one, furthermore you doubt whether there is a well-authenticated instance of there ever having been an egg on any British destroyer, anywhere or at any time, even Cook's dried variety, let alone one warm from the nest.

There is another and an almost conclusive argument. You have telephone receivers on your ears, and you are using a hydrophone, therefore the sound to which you are listening is probably subaqueous, so unless your hen has laid its egg under water . . . Need we pursue the argument further? You see what I mean.

No. You completely abandon the idea that your source of sound is connected with the success of a hen.

All this process of reasoning takes time. You are only a hydrophone officer, not the heroine of a *Daily Mirror* serial. Oh yes, of course intuition would have been a help, but there you are, you know, you have only your powers of masculine logic on which to rely.

Well, it all takes time, and whatever the sound is, it is becoming louder, or so you think.

At last you arrive at the conclusion that it is either the cable, or a torpedo, probably the latter.

Having made up your mind, you grasp the voice pipe to communicate the fateful warning to the officer of the watch on the bridge, when an appalling cataclysm preludes a semiconscious journey through space, the while you wonder whether you are still alive, or merely represented by your astral shape, and you find yourself in the—ditch, deriving such moral support as you can from a floating ditty box.

Just think of it. Assume that you have on your Gieve's life-saving waistcoat, and that it has been inflated, it may well be that you will be saved, and that the long years to come of a mis-spent life will be comforted by the reflection that both the hydrophone and yourself were right. It was a tin fish after all.

On the other hand, it is a matter almost of certainty that your waistcoat was in your cabin at the time of the catastrophe, and that you will live only a few hours.

Perhaps, after all, it is just as well, the comfort will be enormously enhanced by the fact that it will be so highly concentrated, condensed into the space of those short remaining hours. Almost any form of comfort is preferable in a condensed form.

You wonder if that porpoise is feeling as bucked up about it all as you are.

As a strict matter of history the true fact is still *sub judice*, and will ever remain so, for on the occasion which I have in mind, the torpedo (if torpedo it really was) was not new laid, so unfortunately the whole question is cloaked in philosophic doubt, though the listener was quite confident on the point, and it may well be that he was right.

I think that the hydrophone may justly claim to produce all engine sounds that might actually be in the vicinity, and on rare occasions, when for some reason it is misbehaving itself, to run through the whole gamut of sounds seeming to come from some ship, which is no more real, in fact not as real as the phantom ship of Captain Marryat.

Why it did these things it is difficult to say. Probably it was prompted by a well-meaning endeavour to prevent the operator from becoming slack, if so, I think that it succeeded.

It was as well to nurse these little peculiarities and keep them to oneself, for it would have been

a thousand pities to have shaken a faith which was almost childlike in its beautiful simplicity.

The attitude of ward-room and mess deck towards the hydrophone was the same. "We can just sit down and enjoy ourselves. We've got thish yer porpoise, and an outfit of hydrophone blokes aboard, Fritz is powerless to hurt us."

It was a touching creed, worthy of some high spiritual cause. I hope that the porpoise will forgive me, I do not mean to be offensive, but it did not bear too much thinking about.

As a scientific instrument of precision, it was prepared to meet its opponents with a case, but as a cult! Well, that was a different matter, and gave the hydrophonist food for thought.

When its devotees put it up, and made a 'Baal' of it, its priests felt that the incubus of responsibility was grievous. They knew what had happened to those in the past who had set up strange gods.

While the ship was crawling along hour after hour, day after day, there were few of the listeners who did not think that a submarine might have dotted her one from a range from which, assuming that the submarine was not under high speed, it would have been impossible to hear her.

Not that one of them cared an iota for that risk, any more than the crew, but they did feel the heavy responsibility, they felt that the lives

of the ship's company were in their hands, and that, though this was so, in certain circumstances they would be unable to render an account of their stewardship.

Suppose that the worst had happened. Suppose the little band of listeners to be wedged on a Carley raft—after the disaster.

“‘Ere, Bill, overboard with them hydrophone Jonahs to the fishes, them's the blokes as let us down.’”

As soon as the crew appreciated the position the hydrophone work became a real pleasure, which before had been negatived by the responsibility which perhaps was graver than it should have been called upon to sustain.

I think that the creature was expected to prove an irresistible source of attraction, and to haul in Fritzes as fast as a spinner collects shoal mackerel.

This view, of course, became modified in time, but the porpoise never lost its grip on the ship's company ; it was a lovable creature, for those that had not to handle it in a heavy sea, and to all such it belonged to the hydrophone species, being classified under the sub-order ‘theoretically portable.’

The shore-station hydrophones also had their own little individualities, but not so marked. Theirs was a life of mediocre respectability. They were freer from temptation, and if they

did not sink so low, on the other hand, they did not rise so high.

In no length save the few hundred yards that marked the difference of the rise and fall of the tide, was the mortal coil of their cable disturbed in its placid sleep on the ocean bed, save when some warship dropped a heedless hook right in their midst.

The foregoing points have really been made as suggesting the dual element of individual and instrument which rendered detection by hydrophone difficult, as opposed to the personal and intimate encounter with Fritz on the surface by the recognized type of ship used for the purpose, in which case, as a general rule, there remained little doubt as to the issue of the contest. It was either reasonably certain that he had been destroyed, or reasonably certain that he had not.

The hydrophone was merely a not infallible means of detecting the presence of a submarine, but what happened to it afterwards rested with the active methods of offence.

We were only a very temporary service, after all, but many of us speculated as to whether it would not have been possible to run the whole show together. To find the submarines by hydrophone, and put off after them in some such vessels as the later American S.C. craft, with the least possible delay. A sort of unity of command is what we meant.

Such types are of simple construction and fairly easily handled. In any case, as things were our ignorance—possibly capable of rectification—on the manipulation of vessels of the kind required was no more profound than that of the E.D.O. on the subject of hydrophones.

Doubtless it would have entailed an extensive ‘dilution of labour,’ at any rate, in the early stages.

It would have been necessary to bring in a strong leavening of sailors, R.N. or R.N.R., and perhaps, after all, it would have been impossible in the short time available to acquire a technique of seamanship sufficient to render us really useful in the dual capacity.

On the other hand, perhaps not.

However that may be it would have added enormously to the interest in our work, and without doubt increased our efficiency, had it been possible.

Dear dear! What have I said? No, I don’t mean what you think. I am not by nature modest, but . . . I need say no more than that.

Well, it is all over now, and the barrister has returned to a circuit, the charges and discharges of which are at any rate familiar to him.

God speed his endeavours! After all there is a kind of link between the two cults, for if the answer to the question, ‘What is electricity?’

be ' We do not know,' surely that to ' What is Law ? ' is ' We do not want to know.'

The engineer is no longer concerned with what the engine sounds like, except in the advertisement, and the stockbroker has gone back to an exchange where the telephone is but a side issue.

Yes, they have all gone long ago, and it is rather sad, for never again will a better group of fellows be gathered together.

Surely never was there a happier family than H.M.S. *Tarlair*, whether in the parent home on the Forth, or in the numerous stations scattered far and wide that owed her allegiance.

Men of all ages, and of every profession and calling, met together for a common purpose, and from the first welded into the most contented Ship's Company that ever could be.

And what of that sleepy little village that gave us a temporary home, and in the giving perforce shook off her temporary slumber? Will she have kindly memories of the past? Will she miss the measured morning tramp down her ill-paved streets? Lament her depleted congregations at both Scottish and English churches? Sigh for the prosperity that was hers for the while?

Surely she can no more forget than be forgotten, and for many a year to come will turn back the page of memory ever more drowsily, recall to mind the strange Sassenach invasion of those

former years, until at last, what once was, becomes but a part of her dreams, for again she will be asleep.

I feel that some explanation is due in respect of a charge which I think is likely to be brought against me.

It may be said that in these pages I have suggested in so many words that life at Aberdour was a very quiet number. This would be entirely erroneous in the case of the hydrophone Service in general, though, on reading the book, I realize that some such impression might be derived.

The facts are as follows :

In the later stages of the war, to such an extent had the hydrophone enterprise developed, that fresh stations were being plotted at an enormous rate.

Unfortunately, through nobody's fault, at least not *Tarlair's*, a large personnel had been trained by her, and was ready for duty, in fact, was 'standing by,' but the stations, owing to the serious shortage of cable, were not !

Consequently the following state of affairs came about :

Numbers of officers and men waiting, always waiting. They had qualified in all their subjects, and had acquired as much of the practical side of listening as *Tarlair* could give them, and until the stations were ready—and many of them



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never were when the armistice came along—the ingenuity of the Authorities was exercised to find them in what to do.

In so far as you apply these facts, and give to them their proper proportion, *Tarlair* was a quiet number for those who were waiting.

Of course the experimental side, on which I have barely touched—this is no scientific treatise—was always full of work, putting into design fresh types of hydrophone, and actually constructing them, and supplying the bases and ships that used them.

In the early days, curious as it may seem, the work was very much harder, for the reason that, at the end, the scheme had for the moment outgrown the power to cope with it.

The early spade work at both Aberdour and the stations was both arduous and exacting. My own opinion was, that to carry on as a P.O. at a hydrophone shore station, you had to be a real strong man, so don't run away with the impression that it was a C 3 job.

Those incessant night watches, coupled with day routine, made a very severe demand on the powers of the strongest.

Well, I have given very little information in these pages.

A learned professor was once asked by a fascinating young lady the following question :

“What is mind, Professor ? ”

“No matter.”

“What, then, is matter ? ”

“Never mind.”

You may take it from me that I am like that professor. Not that I am learned. Heaven forbid ! Or that I anticipate interrogation by a fascinating young lady, at least not on that particular subject, but I certainly suffer from one or the other of the disabilities that inconvenienced him, probably both.

As to what we did, I have given you the most suitable answer that was in me to give.



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